No. 515

Supreme Court of the United States

OCTOBER TERM, 1960

POWER REACTOR DEVELOPMENT COMPANY, *Petitioner*,

v.

INTERNATIONAL UNION OF ELECTRICAL, RADIO AND MACHINE WORKERS, AFL-CIO, *et al.*, *Respondents*

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

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Petitioner Power Reactor Development Company (hereafter called PRDC) prays that a writ of certiorari issue to review the judgment of the United States Court of Appeals for the District of Columbia Circuit of June 10, 1960 (App. B, p. 42). A majority of a division of this court (Judges Edgerton and Bazelon, with Judge Burger dissenting) ordered to be set aside a unanimous decision and order of the Atomic Energy Commission which had continued in effect, subject to further proceedings, a provisional construction permit for a developmental power reactor being constructed by PRDC. The court held that findings made by the Commission in accordance with its regulations and settled practice were insufficient to satisfy the requirements of the Atomic Energy Act of 1954. The effect of the decision is to invalidate a key provision of the Commission's regulations which established a step-by-step licensing procedure essential to meet the technological requirements of developmental atomic reactors, to upset the uniform practice followed by the Commission thereunder

in reactor construction permit cases, and to throw grave doubt on the Commission's authority to approve construction of such reactors at all within reasonable distances of populated centers.

OPINIONS BELOW

The final opinion and decision of the Atomic Energy Commission is not reported. It is contained in the Joint Appendix printed for the Court of Appeals at Tr. 6933 *et seq.*[1] The opinion of the Court of Appeals (App. B, p. 42) has not yet been reported.

JURISDICTION

The judgment of the United States Court of Appeals for the District of Columbia Circuit was entered June 10, 1960 (App. B, p. 42). Timely petitions for rehearing *en banc* by both the Government and petitioner were denied on July 25, 1960, Judges Miller and Bastian dissenting and Judges Washington and Burger not participating. The jurisdiction of this Court is invoked under 28 U.S.C. § 1254 (1).

QUESTIONS PRESENTED

1. In accordance with its uniform practice, the Atomic Energy Commission issued to petitioner PRDC a "provisional" construction permit authorizing construction, but not start-up or operation, of a developmental nuclear reactor. The Commission's order was supported by findings provided for in Section 50.35 of its regulations that there was reasonable assurance that a facility "of the general type proposed" could be constructed and operated at its location without undue risk to the health and safety of the public. On petition for review, the Court of Appeals for the District of Columbia Circuit held such findings insuffi-

[1] References herein to pages of the transcript of record ("Tr. ——") are to the folio pagination of the original record in this proceeding certified by the Secretary of the Commission and lodged with the Clerk of this Court. This pagination is preserved in the excerpts from this record included in the Joint Appendix printed for the Court of Appeals, nine copies of which have been filed with the Clerk in accordance with Rule 21(4).

cient to satisfy the requirements of the Atomic Energy Act of 1954. The first question presented is whether, as the court held, the Commission lacks authority under the Act to issue reactor construction permits on the basis of the findings called for by its regulation, and whether such regulation and the Commission's settled practice thereunder are accordingly invalid.

2. The Commission here made the findings contemplated by its regulations that the location of the proposed reactor was suitable, and these findings were not attacked as unsupported by the evidence. As an alternative ground of decision, however, the court below held such findings inadequate because it construed the Atomic Energy Act generally as requiring a further finding of "compelling reasons" for approval of a site for any power reactor located within a moderate distance (30 miles) of a substantial population. In this respect the reactor location is generally comparable to that of most other power reactors heretofore authorized by the Commission. The second question presented is whether, as the court held, the Commission is without power under the Act to authorize construction of nuclear reactors within such moderate distances of populated centers without finding "compelling reasons" therefor, and whether, indeed, as the decision below implies, no reasons can be sufficiently compelling, regardless of the technical safeguards provided, to justify location of such licensed reactors in any but remote areas.

3. The only interest asserted by respondent labor unions here is that of their members located in the general area of the proposed reactor in not having their safety or property subjected to unreasonable hazard from its operation, after completion of construction. The Commission's order specifically authorizes only construction, and provides that no license to operate the reactor will be granted unless, in further proceedings to which respondents will be parties, petitioner PRDC can show that such operation will present no undue risk to them or the public. The third question presented is whether, under these circumstances, respondents have been "aggrieved" by an order of the Commis-

sion which is "final" as to them, and whether the court below therefore had jurisdiction to entertain their petition for review. Atomic Energy Act of 1954, as amended, Section 189 b; Judicial Review Act of 1950, as amended, Sections 2, 4; Administrative Procedure Act, Section 10 (App. C, pp. 62-66).

STATUTES AND REGULATIONS INVOLVED

The pertinent provisions of the Atomic Energy Act of 1954, 68 Stat. 919, as amended, 42 U.S.C. §§ 2011 *et seq.*; of the Judicial Review Act of December 29, 1950, 64 Stat. 1129, as amended, 5 U.S.C. §§ 1031 *et seq.*; of the Administrative Procedure Act, 60 Stat. 237, 5 U.S.C. §§ 1001 *et seq.*; and of Sections 50.34 and 50.35 of the Atomic Energy Commission's regulations (10 CFR §§ 50.34, 50.35), are set forth in Appendix C (pp. 56-68).

STATEMENT

Petitioner PRDC is a non-profit membership corporation, each of whose 21 members is a substantial public utility or industrial corporation in the United States (Finding 1, Tr. 7013; Tr. 6990-91). It is engaged in the construction of a developmental fast-neutron breeder reactor[2] at Lagoona Beach, Monroe County, Michigan, an essentially rural area on the shore of Lake Erie, approximately 30 miles southwest of Detroit. It is undisputed that this is not a commercial venture in any sense, but is "a research and development facility" (Finding 2, Tr. 7013). In accordance with this concept the member companies of PRDC have no capital investment as such in the project. Their substantial financial contributions are treated as having

[2] A summary description of the reactor and the principal features which make it an important step forward in nuclear development is contained in the Commission's opinion at Tr. 6972-75. A more extensive but simple and lucid explanation of the basic principles of power reactors, and particularly of "fast breeder" reactors, is contained in the testimony of Dr. Hans A. Bethe, a PRDC consultant and one of the world's leading nuclear physicists (printed Joint Appendix, Vol. III, Tr. 3955-60).

been expended for research and development and not as having been invested or capitalized in the ordinary sense. PRDC's articles of incorporation specifically provide that no part of any net earnings may inure to the benefit of its members. They also provide that contributions made may not be repaid to them in whole or in part, even on dissolution, since in that case any remaining net assets must be devoted to educational or scientific purposes (Tr. 3923, 5137-43).

On January 6, 1956, PRDC filed its application for license under Section 104 b of the Atomic Energy Act of 1954 for the construction and operation of its proposed nuclear reactor as a research and development project (Tr. 5716). On August 4, 1956, the Commission issued to PRDC a construction permit "on a provisional basis" under Section 50.35 of its regulations (Tr. 6290-95). Shortly thereafter, respondent labor unions intervened in the proceeding. They opposed continuation of the permit on the sole claim that PRDC had failed to make a sufficient showing that *operation* of the proposed reactor, following its completion, would not create a hazard to them, their members, and their property in the general vicinity of Detroit (Tr. 6298). It was agreed from the outset that actual construction of the reactor—the only activity authorized by the construction permit—presented no hazard to the respondents or the public.

Following an extensive hearing before a hearing examiner, and briefs and oral argument before the Commission itself, the Commission entered an initial decision modifying and continuing the provisional construction permit in effect (Tr. 6873 *et seq.*). After further consideration of exceptions filed by respondents and briefs by all parties, the Commission unanimously (Commissioners Vance, Floberg and Graham) entered its final order of May 26, 1959, affirming its initial decision (Tr. 6933-7033).

1. The Decision of the Commission

Section 50.34 of the Commission's regulations specifies the technical information required to be included in appli-

cations for reactor licenses generally (App. C, pp. 66-67). Section 50.35, entitled "Extended time for providing technical information", authorizes the issuance of construction permits "on a provisional basis," prior to submission of all technical data required by Section 50.34, on a finding by the Commission, *inter alia*, of "reasonable assurance that a facility *of the general type proposed* can be constructed and operated at the proposed location without undue risk to the health and safety of the public" (italics supplied; see full text of regulation in App. C, pp. 67-68, below). Issuance of an operating license is specifically subject to the later production by the applicant of the requisite additional technical information when it becomes available, and to the subsequent definitive determination by the Commission after hearing, before such license can be issued, that "the final design provides reasonable assurance that the health and safety of the public will not be endangered." The provisional construction permit contemplated by this provision of the regulations thus authorizes only construction, and carries no presumption or implication that an operating license will follow, unless the applicant is later able to sustain the burden of adequately showing the safety of "the final design" of the reactor.

The Commission in its opinion and decision here made the precise findings called for by its regulations. It found in the words of Section 50.35 that there was "reasonable assurance", for purposes of the provisional construction permit in question, that "a utilization facility *of the general type proposed* in the PRDC Application and amendments thereto can be constructed and operated at the location without undue risk to the health and safety of the public" (italics supplied) (Finding 22, Tr. 7020; see also Finding 30, Tr. 7022; Finding 32, Tr. 7023; Tr. 6983-84). As explained more fully below (p. 15), the construction permits issued for every one of the eight other developmental power reactors authorized to date have been similarly "provisional" permits, issued under this regulation, and have been supported by the same finding of reason-

able assurance of safety in terms of "the general type proposed".

None of the safety findings made by the Commission was attacked by respondents in their petition for review as unsupported by the evidence and, accordingly, they must be accepted as established here.

In its opinion and decision the Commission made it perfectly clear that it interpreted Section 50.35 of its regulations as requiring a less definitive determination of safety of operation for issuance of a "provisional" construction permit than would be subsequently required to support issuance of an operating license:

> "The degree of 'reasonable assurance' with respect to safety that satisfies us in this case for purposes of the *provisional* construction permit would not be the same as we would require in considering the issuance of the *operating* license" (AEC Opinion, Tr. 6987).

In fact, the establishment of this step-by-step licensing procedure was the very objective of the regulation, an objective made necessary by the nature and inherent characteristics of a developmental reactor in the setting of the present status of nuclear progress. See AEC Opinion, Tr. 6983, and pp. 17-19, below. Accordingly, the Commission stated that, as Section 50.35 of its regulations contemplates, its determinations with respect to safety of operation were made for purposes only of the provisional construction permit. It emphasized that no decision was being made or implied on the safety issue that would be presented in connection with the further proceedings which must be had before an operating license could issue, and which would be judged by the more severe standards of reasonable assurance then called for (Tr. 6956-57, 6987). An extensive and detailed procedure for continuing review of this and other questions was specifically provided for in the decision (Tr. 7023-24), in the order entered (Tr. 7025-26, 6887-88), and in the terms of the amended construction permit itself (Tr. 7029-31).

As the Commission stated it,

> "Before we authorize the issuance of an operating license to PRDC at a further reopening of this proceeding, we will require that all safety questions be answered to our complete satisfaction, as required by the statute and our regulations. Under such circumstances, the public interest and that of the Intervenors [respondents] have been protected" (Tr. 6938). See also amended construction permit, Tr. 7030-31.

From the outset, PRDC has understood and accepted the fact that issuance of its provisional construction permit carries with it no implication whatever that an operating license will later be granted. It has explicitly recognized that if it should be unable to sustain the burden of showing that the reactor as completed can be safely operated in accordance with the strict standards of proof required by the Commission for such determination, it would not be able to obtain authority to operate the reactor. The assumption of this financial risk was willingly accepted in this non-profit research undertaking as an inevitable concomitant of progress in nuclear technology at this early stage of development of the art. The Commission in its opinion stated:

> "It would be hard to imagine a case where an applicant would be less able to argue that he had been misled by previous favorable Commission action. Under the circumstances of this case, moreover, and in view of the wording of the provisional construction permit, it is perfectly clear that PRDC is assuming a substantial financial risk with its eyes wide open, and that the generation of any pressure from such ingredients would be quite absurd".[3]

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[3] Tr. 6956-57. It should be emphasized again that this is not a commercial enterprise whose sponsors could unexpectedly find themselves in the position of having wasted a large capital investment in an unusable "white elephant". The nature of this project as a research and development undertaking is inherently such that, even in the unlikely event that for some reason opera-

2. The Decision of the Court of Appeals

Respondent labor unions duly filed with the Court of Appeals for the District of Columbia Circuit a petition to review the Commission's decision under Section 189 b of the Atomic Energy Act and the provisions of the Judicial Review Act of December 29, 1950, as amended, and of the Administrative Procedure Act (App. C, pp. 62-66). On June 10, 1960, a majority of a division of that court reversed the Commission and ordered the provisional construction permit set aside. The opinion of the court was written by Judge Edgerton and concurred in by Judge Bazelon, with Judge Burger dissenting.

The court recognized that respondents had not shown any injury from construction of the reactor—the only activity authorized by the Commission's order. It also recognized that this order specifically provided for further proceedings including a *de novo* hearing, prior to operation, on the only question in which respondents had a legitimate interest—whether the reactor as actually completed could then be operated without undue risk to them and to the public (App. B, pp. 44-45). Nevertheless, the court held that the Commission's order was "final" with respect to these respondents and sufficiently "aggrieved" them to make it reviewable under applicable statutes (*id.* at p. 45).

On the merits, the court held that the relevant provisions of the Atomic Energy Act of 1954 required the Commission to make essentially the same finding with respect to safety of operation of a proposed reactor "as of the time the construction permit is issued" that it admittedly must make "when it authorizes operation" (App. B, p. 45). The court nowhere cited or discussed Section

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tion of the plant must be seriously postponed or cannot be undertaken at all, the substantial practical engineering information and experience developed in its design, construction and nonnuclear testing would make it a success from the research and development standpoint, and the data thus obtained would be of great value to later generations of reactors. This position of PRDC has been repeatedly stated on the record, and was accepted by the Commission. See AEC Opinion, Tr. 6956, n. 31.

50.35 of the Commission's regulations. As stated above, this regulation establishes a two-stage procedure calling for the issuance of "provisional" construction permits on the basis of an initial finding of reasonable assurance of safety only "of the general type proposed", to be followed by a more definitive finding, prior to issuance of an operating license, that "the final design provides reasonable assurance that the health and safety of the public will not be endangered." Ignoring this regulation, the court held that the Commission must make initially the ultimate finding that "the reactor" can be operated at the proposed site without undue risk (App. B, p. 45). The effect of the court's decision is necessarily to invalidate Section 50.35 of the Commission's regulations and the step-by-step licensing concept which it embodies.

The court went on to discuss certain of the Commission's findings with respect to the proposed reactor and reactors of the "general type proposed", failed to recognize the distinction drawn by the regulation between these two types of findings, and held such findings accordingly not to have satisfied the statute as interpreted (App. B, pp. 48-51). While admitting that there were strong practical and technical reasons behind the Commission's step-by-step licensing policy (App. B, p. 50), the court relied upon an isolated item selected from the extensive legislative history of the Act to support the conclusion that Congress intended to deprive the Commission of authority to follow such procedure (*id.* at pp. 46-48). It recognized that its interpretation of the statute might be doubtful, but it resolved that doubt against the Commission, contrary to ordinary canons of statutory construction (*id.* at p. 48).

The court rested its decision on the merits on an additional ground which also has most serious implications for effective administration of the Act and for the future of the country's nuclear development program. After quoting from statements in the introduction to a technical Commission study with respect to the "possible consequences" of "certain hypothetical major accidents" which might occur in "a typical large nuclear power reactor", the

court concluded, without referring to any identified statutory provision or to any specific item of legislative history, "that Congress intended no reactor should, without compelling reasons, be located where it will expose so large a population to the possibility of nuclear disaster" (App. B, p. 52). By adding the dictum that it need not now consider "whether even the most compelling reasons for preferring this location" could support a finding that the reactor could be operated there without undue risk (*ibid.*), the court indicated that its basic intent was, as a practical matter, to deter the Commission from approving the location of *any* reactor in an area having a population density comparable to that found here.[4] The Commission, of course, did not here and has not in any other reactor licensing case considered it either necessary or appropriate to find "compelling reasons" for the selection of a particular location so long as it made the findings required by its regulations.

Judge Burger vigorously dissented from all aspects of the court's decision. As he put it, the sole basis on which the respondents were challenging the Commission's order was that there was a "future possibility" that an operating permit would subsequently be "unlawfully and improperly issued by the Commission". In his view, accordingly, the order of the Commission was not a "final order" of the sort which properly "aggrieved" the respondents or gave the court jurisdiction on a petition for review (App. B, p. 53, below). On the merits, he considered the Commission's practice in issuing provisional construction permits fully consistent with the statute, stating that

> "In an area involving as much scientific uncertainty as development of nuclear energy for peaceful purposes, the Commission must be permitted to proceed step by step, *i.e.*, make its preliminary finding of probable safety when the construction permit issues and

[4] As noted below (pp. 27-28), the population distribution characteristics of this site are generally comparable to those of other reactors thus far authorized by the Commission.

reserve final approval of operations until a later date" (App. B, p. 53, below).

Finally, Judge Burger characterized that aspect of the decision dealing with the suitability of the location of the reactor as an unwarranted assumption by the court of "responsibilities which Congress vested in the Commission" (*ibid.*). He accordingly thought that the petition for review should have been dismissed.

Petitions for rehearing *en banc* filed by both the Government and PRDC were denied by the court by order entered July 25, 1960, Judges Miller and Bastian dissenting, and Judges Washington and Burger not participating in such order.

REASONS FOR GRANTING THE WRIT

This is the first case in which the courts have been asked to construe the regulatory provisions of the Atomic Energy Act of 1954. In a new and vitally important area in which expert knowledge and experience are probably more relevant than in any other, a majority of the court below has held the Commission's consistent practice in issuing construction permits for developmental power reactors "on a provisional basis" to be contrary to the statute, and has *sub silentio* invalidated the Commission's regulation providing for this procedure (Question 1, pp. 13-25, below). The court has also imposed on the Commission its judgment with respect to reactor location policy in such a way as to cast grave doubt on the validity of both construction permits and operating licenses which the Commission has issued to numerous other reactors located in areas of comparable or greater population density, and of the Commission's settled practice in approving such locations (Question 2, pp. 25-32, below). In each of these two respects the decision below (1) presents an important question of federal law which has not been but should be settled by this Court, (2) frustrates in basic particulars the administration of the regulatory provisions of the Atomic Energy Act of 1954, and (3) contrary to the explicit policy of the statute, imposes a serious roadblock to progress in the

application of nuclear energy to peacetime purposes. It is therefore appropriate for review on certiorari by this Court. Compare *United Gas Pipe Line Co.* v. *Memphis Light, Gas and Water Division*, 358 U.S. 103, 109.

In holding the Commission's decision to be now reviewable at the instance of these respondents, the court below has also decided an important question with respect to reviewability of federal administrative agency decisions under the Judicial Review Act of 1950 and the Administrative Procedure Act (App. C, pp. 63-66), in a way inconsistent with fundamental principles laid down by this Court and accepted in other circuits (Question 3, pp. 32-38, below).

I

IN HOLDING THE COMMISSION'S SAFETY FINDINGS INSUFFICIENT TO SUPPORT ISSUANCE OF A PROVISIONAL CONSTRUCTION PERMIT THE COURT BELOW HAS OVERTURNED A COMMISSION REGULATION AND THE CONSISTENT ADMINISTRATIVE PRACTICE THEREUNDER AND HAS DECIDED AN IMPORTANT QUESTION OF FEDERAL LAW WHICH HAS NOT BEEN BUT SHOULD BE SETTLED BY THIS COURT.

A majority of the court below has held unequivocally that under the statute the Commission cannot issue a construction permit for a power reactor unless *at that time* it makes the same definitive findings with respect to safety of the proposed reactor that admittedly must be made prior to issuance of an operating license. The court quoted the contention of the respondents that

> "The Act and the regulations of the Commission . . . require, as conditions precedent to the issuance of every construction permit for an atomic energy power reactor, that *as of the time the construction permit is issued* the Commission find that (1) it has reasonable assurance that the reactor may be constructed *and operated* at the proposed site without undue risk to the health and safety of the public. . . ."

The court then added:

> "It is undisputed that the Commission must make such a finding when it authorizes operation. The question is whether it must make such a finding when it authorizes construction. In our opinion it must" (App. B, p. 45).

It is thus plain that, although the court neither discussed nor cited Section 50.35 of the Commission's regulations, the inevitable effect of its decision is to invalidate this regulation, the step-by-step licensing procedure which it provides, and the Commission's uniform practice of issuing construction permits for developmental power reactors thereunder "on a provisional basis". The regulation distinguishes between the degree of assurance of safety of "the general type proposed", required for a provisional construction permit, and the degree of assurance of safety of "the final design", required for an operating license (App. C, pp. 67-68). As the Commission made plain in its opinion (Tr. 6987), the basic concept of this provision is that a lesser degree of assurance of operating safety is sufficient for authorization of a provisional construction permit than is necessary for an operating license.[5] It was only because the court below rejected this concept and confused the distinction between the two types of findings contemplated by Section 50.35 that it held the findings which the Commission actually made to be inadequate and ambiguous.[6]

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[5] As this Court has said, an administrative agency's interpretation of its own regulation is "of controlling weight unless it is plainly erroneous or inconsistent with the regulation". *Bowles* v. *Seminole Rock Co.*, 325 U.S. 410, 414.

[6] In the passage from the court's opinion quoted above in the text (pp. 13-14), the distinction between findings with respect to "the reactor" and a reactor of "the general type proposed" was ignored. In spite of the provisions of Section 50.35 of the regulations, the court explicitly stated that, when the Commission authorizes construction, it must make a finding of reasonable assurance that "the reactor" can be constructed and operated at the proposed location without undue risk.

In fact, when the findings are read in the light of the Commission's explanation of its regulatory scheme, they are neither inadequate nor ambiguous.

The question presented by this aspect of the court's decision is of obvious importance to the proper administration of the Atomic Energy Act. Every one of the nine power reactors thus far licensed by the Commission—all "developmental" reactors under Section 104 b of the Act—has been issued a provisional construction permit based on similar findings of reasonable assurance of safety "of the general type proposed." See App. A, Part I, pp. 40-41, below. The great majority of permits for smaller training and research reactors have similarly been "provisional" and issued on the basis of the same finding.[7]

Apart from this consistent practice, however, a summary consideration of the relevant statutory provisions and their setting will make clear that the Commission's regulation and action thereunder are not only in full accord with the Atomic Energy Act, but are essential to the attainment of its primary objectives. The decision of the court below is based in large part upon a misunderstanding or disregard of the Commission's expert evaluation of complex technical factors inherent in the construction of developmental power reactors at this early stage of the application of atomic energy for peaceful uses.

First. The Atomic Energy Act of 1954 is one of the landmark statutes of the post World War II period. Its specific provisions as well as its extensive legislative history[8] make abundantly plain that the impulse behind it was wide-

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[7] The Commission now requires these same findings also to be made in connection with AEC-owned power reactors being built under its Power Demonstration Reactor Program, which reactors are not required to be licensed under the Act. See, *e.g.*, City of Piqua, Ohio, 24 Fed. Reg. 8279-80, and App. A, Part II, p. 41, below.

[8] This legislative history (of 3994 pages) has been organized and published in three volumes. See *Legislative History of the Atomic Energy Act of 1954* (U.S. Atomic Energy Comm., Govt. Print. Off., 1955). It is hereafter cited as *Legis. Hist.*

spread. Congressional recognition of the urgent need to accelerate the development of atomic energy for peaceful purposes by increasing to the maximum extent the opportunities for participation by private industry. Members of the Joint Committee on Atomic Energy acknowledged repeatedly that the United States was engaged in a crucial race for supremacy in peacetime atomic progress and that exploitation of the ingenuity and inventiveness of private enterprise was essential. Congress acted on an impressive body of evidence that demonstrated the desirability of private industrial development of many different kinds of nuclear reactors, and that emphasized the importance of speed in such development in order to maintain American leadership in this field.[9]

In the specific provisions of the Act, Congress drew a sharp line between commercial projects to be licensed under Section 103 and research and development projects to be licensed under Section 104 (App. C, pp. 57-59). Particular emphasis was laid upon the importance of "utilization and production facilities [reactors] involved in the conduct of research and development activities leading to the demonstration of the practical value of such facilities for industrial or commercial purposes", to be licensed under Section 104 b—the class of project involved here. This Section 104 b of the Act further provides that in issuing licenses thereunder "the Commission shall impose the minimum amount of such regulations and terms of license as will permit the Commission to fulfill its obligations under this Act to promote the common defense and security and to protect the health and safety of the public". It admonishes

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[9] See, *e.g.*, II *Legis. Hist.* 1831-32; III *id.* 2879, 3004, 3723; statement of Dr. Lawrence R. Hafstad, Director of Reactor Division, *Hearings Before the Joint Committee on Atomic Energy on Atomic Power Development and Private Enterprise*, 83rd Cong., 1st Sess. (1953), pp. 22-23.

See also Atomic Energy Act of 1954, Sections 1, 3 a, d, and 104 b, App. C, pp. 56, 58, below.

that "priority shall be given to those activities which will, in the opinion of the Commission, lead to major advances in the application of atomic energy for industrial or commercial purposes" (App. C, p. 58). The Commission here found that the proposed PRDC reactor is such an activity (Findings 10, 26, Tr. 7016, 7021-22).

Section 182 a of the Act (App. C, pp. 60-61) spells out the nature of the Commission's obligations recited in Section 104 b with respect to protection of the "health and safety of the public" by providing specifically that in connection with applications for "*licenses to operate* production or utilization facilities" the applicant shall state such technical specifications and other information as the Commission's regulations shall require to enable it to find that there will be "adequate protection to the health and safety of the public" (italics supplied). This subsection imposes no statutory requirements with respect to the issuance of constructon permits as such. Section 185, which does deal in terms with construction permits, contains no provision covering the findings required at that stage, but its language indicates a recognition by Congress that an initial application for such a permit need not and in many instances cannot contain all the technical information required to be evaluated at the time the subsequent operating license is considered (App. C, p. 62).

Second. With these new statutory provisions before it, and with its expert knowledge of the technical problems involved in the task of developing safe and economically feasible nuclear electric power, the Commission was faced at the outset of its administration of this Act with the very practical problem of determining what showing was to be required at the construction permit stage. Of most pressing importance were the procedures to be utilized in licensing developmental and research reactors under Section 104 b—the projects which Congress had ordered be given priority, and in fact the only class of power reactors

for which licenses have thus far been sought or issued. The Commission was plainly aware, and specifically found here, that

> "It is in the nature of reactor design, although certainly not unique to it, that many features remain to be designed and demonstrated after construction is begun—and indeed some features redesigned and replaced after operation is under way. . . ." (Tr. 6983.)

The Commission also quoted approvingly (*ibid.*) the uncontradicted testimony of the late Dr. Mark Mills, a member of the Advisory Committee on Reactor Safeguards, that "[p]ractically all advanced technological developments take place with a sort of combined construction and research and development and necessary dovetailing of these things . . .". (Tr. 3278), and of Dr. Hans Bethe that "the simultaneous pursuit of programs of research, development and construction has become standard in the fast-moving field of atomic energy and is necessary in order to keep abreast or ahead of our competitors" (Tr. 3960).[10]

The Commission has thus understood fully from the outset that a developmental reactor as contemplated by Section 104 b is by its nature a step beyond previously proven devices. Continuing design modification based on experience obtained from actual construction and in-place testing is unavoidable for this type of project. It was readily apparent to the Commission, therefore, that to require a definitive safety finding with respect to operation of such a reactor at the construction permit stage could

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[10] With respect to this particular reactor, the Commission further stated that

> "As in the case of any other power reactor at this stage of the art, in addition to the design features of the reactor which will be determined and demonstrated before the actual construction of the reactor, many other such features will be determined and demonstrated during its actual construction. This fact merely underlines the importance of the development of the first breeder reactor at an early date" (Tr. 6975).

render it near-impossible ever to allow non-Governmental bodies to construct reactors which would, in the words of the statute, "lead to major advances in the application of atomic energy for industrial or commercial purposes". At best it would considerably delay private development of atomic energy. Either result would be contrary to the clear Congressional policy to foster private developmental programs with the greatest practicable expedition.[11]

On the other hand, the Commission recognized that if no real showing with respect to probable safety of operation were initially required, ill-considered projects, having no substantial chance of successful completion or eventual licensing, might be encouraged, with resultant economic waste. Acting pursuant to the authority granted by Congress, the Commission accordingly promulgated Section 50.35 of its regulations as a sensible and practicable solution to this problem. The step-by-step procedure which it contemplates was designed to accommodate the technological facts of life, with which the Commission was fully acquainted, to the Congressional mandate.

Third. Neither the applicable statutory provisions nor anything in their legislative history requires or justifies the court's invalidation of this carefully devised regulatory scheme. As noted above, the plain provisions of Section 182 a require that the definitive determination of safety

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[11] At a later stage of development of the art, it may well be practicable to require a more definitive safety showing prior to the start of construction. Such a requirement, for example, might be imposed for reactors sought to be licensed under Section 103 of the Act as purely commercial ventures. With respect to some of the small research and training reactors already licensed, which the Commission in its opinion said "have become virtually production line items" (Tr. 6955), it has already been possible to issue construction permits on the basis of findings of "reasonable assurance that *the reactor* can be constructed and operated at the proposed location without undue risk to the health and safety of the public". See, *e.g.*, CPRR-50, *American Radiator and Standard Sanitary Corp.*, 25 Fed. Reg. 1968. Such a stage of development, however, is plainly not yet here for power reactors.

of operation of proposed reactors must be made in connection with applications for "licenses to operate" them (App. C, pp. 60-61). This provision is to be distinguished from the requirements of the other subsections of Section 182, all of which are applicable in general terms to any "license"—a generic term which, as provided in Section 185, includes construction permits as well as operating licenses unless the context otherwise indicates.

The court below relied heavily on an isolated passage from the extensive legislative history of this complex statute (App. B, pp. 46-48). This consists of a brief exchange on the floor of the Senate between Senators Humphrey and Hickenlooper (III *Legis. Hist.* 3759-60). Senator Humphrey (who opposed the administration bill throughout and voted against its passage by the Senate, *id.* at 3877) had offered an amendment to the construction permit provisions of the Act (Section 185) which would have required the "completion of the procedures established by Section 182 prior to the issuance of any construction permit" (*id.* at 3759). This amendment was one of several which had been urged in both Houses by opponents of the administration bill. Its basic purpose was to make specifically applicable to construction permits not the safety determinations which were (and are) explicitly required by Section 182 a only for an "operating license", but rather the notice and preference provisions of subsections 182 c and d (designated in the bill and in the Act as originally passed as subsections 182 b and c), and the hearing and judicial review requirements needed to implement these provisions.[12] This becomes plain when the history and setting of the amendment are considered.

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[12] Subsection c (originally b, App. C, p. 61) forbids issuance of any commercial license under Section 103 until notice has been given to appropriate state regulatory bodies and to municipal, cooperative or private utilities within transmission distance. Subsection d (originally c, App. C, p. 61) requires that "preferred consideration" for such Section 103 licenses be given to facilities located in high-cost power areas, and to public or cooperative bodies.

Senator Humphrey's amendment had been first advocated in the House by Representatives Holifield and Price (who also opposed and voted against the bill, III *Legis. Hist.* 2962-63) in their separate views attached to the Joint Committee's report on the bill. In this, they explained its basic purpose as to make construction permits "specifically subject to the same procedural safeguards, assuring interested parties full opportunity for notice, hearing, and appeal before issuance, as are provided in connection with the issuance of licenses under Section 182". (I *Legis. Hist.* 871; III *Legis. Hist.* 2857). On the preceding page of this same report they had urged that the notice and preference provisions of subsections 182 b and c, as they were then designated (footnote 12, above), should also be broadened to include public and cooperative bodies (I *Legis. Hist.* 870). Amendments to accomplish these latter objectives had been successfully sponsored in the Senate by Senator Humphrey prior to his introduction of the amendment now under discussion (III *Legis. Hist.* 3475, 3479).

At no time was the suggestion made that the proposed amendment concerned public safety; in the very minority report of the Joint Committee on Atomic Energy in which it had been first suggested, it was stated that the licensing provisions of the bill as originally reported lacked proper safeguards "except for the requirements of national security and public health and safety" (I *Legis. Hist.* 869). As a broader view of the legislative history shows, what Senator Humphrey and his colleagues were primarily worried about was that atomic energy might be used to foster large private monopolies to the detriment of the public and publicly owned facilities. They feared particularly that the effectiveness of the notice and preference provisions of Section 182, which had been successfully broadened by their amendments, might be limited if these provisions, and the hearing and judicial review procedure necessary to enable their enforcement by parties having the requisite interest, were not clearly applicable to construction permits as well as to operating licenses. It was in this context that Senator Humphrey

mentioned the possibility of pressure resulting from issuance of a construction permit.

Senator Humphrey's amendment was withdrawn when Senator Hickenlooper explained that the existing provisions of the bill, including changes which had been made in Section 189 making construction permits expressly subject to the hearing and judicial review provisions of the Act, rendered it unnecessary. In the light of this background, Senator Hickenlooper readily agreed that "a license and construction permit are equivalent" (III *Legis. Hist.* 3759). He obviously meant that they were equivalent from the standpoint of the procedural safeguards and the notice and preference provisions which had been in controversy.

That this was all that was intended, and that even the minority was not advocating the far-reaching limitation on the authority of the Commission to issue provisional construction permits which has now been imposed by the court below, is further indicated by Senator Humphrey's subsequent reference to this colloquy in a statement included in the Congressional Record just prior to the vote on the bill in the Senate. In this statement he described the interpretation discussed on the floor and principally relied on by the court below as "applying same preference standards to construction permits as provided by previous amendment for licenses to use atomic energy" (III *Legis. Hist.* 3877).

Considered in its full context, therefore, this fragment of the extensive debate on this Act is not entitled to the controlling weight given it below. Materials drawn from legislative history are most useful in revealing general purpose and not "the specific meaning of a statute on a particular occasion." Cox, *Judge Learned Hand and the Interpretation of Statutes*, 60 Harv. L. Rev. 370, 379 (1947). The exchange relied on is a good illustration of the wisdom of the proposition that "[a] loose statement even by a chairman of a committee, made impromptu in the heat of debate, less informing in cold type than when heard on the floor, will hardly be accorded the weight of

an encyclical." Frankfurter, *Some Reflections on the Reading of Statutes*, 47 Colum. L. Rev. 527, 543 (1947). The Commission rather than the court below has properly understood and applied the basic Congressional purpose as indicated both by the statutory provisions and by the Act's over-all legislative history.

Fourth. In upsetting the Commission's regulation and consistent practice, the court below has overstepped the bounds of judicial review and has disregarded limitations which this Court has frequently admonished the federal courts to follow. The regulation involved here was promulgated pursuant to authority expressly delegated to the Commission in Sections 161 and 182 a (App. C, pp. 59-61). The licensing provisions of the Act could not themselves come into effect until the framework they provided was built upon by these essential regulations. Congress plainly intended to grant the Commission substantial discretion of a quasi-legislative nature in implementing and effectuating the Act's basic purposes. See 1 Davis, *Administrative Law Treatise* (1958) § 5.03 pp. 302-03; compare *Addison* v. *Holly Hill Fruit Products, Inc.*, 322 U.S. 607, 613-14; *American Trucking Associations, Inc.* v. *United States*, 344 U.S. 298, 314.

It is axiomatic, also, that an agency's interpretation of the statute which it administers is entitled to great weight. As this Court aptly stated in *United States* v. *American Trucking Associations, Inc.*, 310 U.S. 534, 549, quoting with approval *Norwegian Nitrogen Co.* v. *United States*, 288 U.S. 294, 315:

> "This is peculiarly true here where the interpretations involve 'contemporaneous construction of a statute by the men charged with the responsibility of setting its machinery in motion, of making the parts work efficiently and smoothly while they are yet untried and new.'"

Where, in addition, the administrative agency is operating in a field involving a wholly new and extremely complex technology, the very understanding of which requires tech-

nical competence and skill of a high order, the courts should be particularly reluctant to overturn the agency's basic regulatory scheme. Compare *Board of Trade of Kansas City* v. *United States*, 314 U.S. 534, 548; *United States* v. *Storer Broadcasting Co.*, 351 U.S. 192, 203. And where, as here, the uniform and settled practice of the agency over a period of years since enactment of the statute has been in accordance with its regulation, and where this practice has repeatedly been brought to the attention of Congress but not dealt with in subsequent amendments,[13] there is even more reason for upholding the agency's interpretation. Compare *United States v. Shreveport Grain & Elevator Co.*, 287 U.S. 77, 84; *United States* v. *Bergh*, 352 U.S. 40, 46-47; *Ivanhoe Irrigation Dist.* v. *McCracken*, 357 U.S. 275, 292-94.

The justification given by the court below for refusing to apply these basic principles of judicial review is found in the statement that "[t]he possibilities of harm are so enormous that any doubt as to what findings the Act requires . . . should be resolved on the side of safety" (App. B, p. 48). This, of course, overlooks the Commission's uncontested determination that the issuance of this provisional construction permit "does not in any manner adversely affect the health and safety of the public or that of . . . [the respondents]" (Tr. 6964).

Furthermore, at the present stage of development of the art, there is a genuine question whether the rigid construction permit rule imposed by the court below, which appears to make issuance of a reactor operating license a relatively

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[13] See AEC Opinion, Tr. 6958-65, for summary of extent to which the Commission's practice with respect to provisional construction permits was brought to the attention of the Joint Committee on Atomic Energy in 1956 and again in 1958. Congress has taken no action to overturn this administrative practice, although the Atomic Energy Act of 1954 has been amended in some particulars at every session of Congress since its enactment. The Joint Committee occupies a unique role in that it is established by the Atomic Energy Act of 1954 itself, and Section 202 specifically enjoins the Commission to "keep the Joint Committee fully and currently informed with respect to all of the Commission's activities." App. C, p. 63. Compare *Panama Canal Co.* v. *Grace Line, Inc.*, 356 U.S. 309, 318-19.

automatic sequel to a construction permit, does not in the long run create more safety problems than it solves. The court appeared to read the Act as requiring "issuance of a license when the permitted construction is carried out" (App. B, p. 48). This may well be a safe and appropriate procedure when power reactors have become sufficiently standardized to justify issuance of commercial licenses under Section 103. In an area in which the technology is moving forward so rapidly, however, the wisdom from a safety standpoint of making a decision on the basis of information available in 1960, for example, to issue an operating license for an advanced developmental project to be completed in 1964 or 1965, would appear very dubious. This is the very type of question which the Commission, with the necessary expertise available to it, is much better qualified to resolve than are the courts, and the type of question which Congress plainly intended to entrust to the Commission's informed judgment.

II

IN HOLDING THAT THE COMMISSION MUST FIND "COMPELLING REASONS" TO JUSTIFY APPROVAL OF ANY REACTOR LOCATION WITHIN A REASONABLE DISTANCE OF POPULATED CENTERS, THE COURT BELOW HAS RENDERED A DECISION WHICH USURPS THE COMMISSION'S FUNCTION, OVERTURNS ITS CONSISTENT PRACTICE, AND FRUSTRATES ITS ADMINISTRATION OF THE ACT. SUCH DECISION CALLS FOR AN EXERCISE OF THIS COURT'S POWER OF SUPERVISION.

Another aspect of the decision below which has most serious implications for the nation's atomic power development program is that which holds the Commission's findings with respect to the reactor site deficient for failure to include what are called "compelling reasons" justifying the particular location. The court points to no provision of the statute or its legislative history requiring or even contemplating such a determination; rather, it indicates that in its judgment the fact that such location could expose "so large a population" to the mere *possibility* of nuclear

disaster makes such additional determination mandatory. No such "compelling reasons" have been found to support approval of any other reactor location, nor has such finding been considered by the Commission to be either necessary or appropriate.

That the court's holding as a practical matter amounts to imposition on the Commission of an arbitrary rule forbidding the location of large reactors in any populated area is indicated by the further statement that

> "We need not consider whether even the most compelling reasons for preferring this location could support a finding that the reactor could be operated at this location without 'undue' risk, or with 'adequate' protection, to the health and safety of the public." (App. B, p. 52).

It is important to note that in this aspect of its decision the majority of the court below is referring to "a typical large power reactor" and not to any unique characteristics of this particular project. The basic statements quoted with respect to theoretical or potential maximum danger to the population in the general vicinity of a large reactor are taken from the introduction to the Commission's so-called Brookhaven Report (Tr. 4853). This is a theoretical environmental analysis of general applicability to power reactors as such, and its conclusions are expressly subject to the numerous assumptions and limitations stated therein.[14] Similarly, the statement quoted in the opinion that there is a "possibility of a major disaster, even though it has a low probability", is taken from a statement initially made to a Congressional Committee by Dr. C. Rogers McCullough, former Chairman of the Commission's Advisory Committee on Reactor Safeguards, as part of his "general views on these questions of hazard evaluations" for reactors generally (Tr. 2999-3003).

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[14] Only the introduction (Tr. 4852-57) and a selected fragment of the text (Tr. 4885-92) of this extensive and highly technical report have been printed in the Joint Appendix. The entire report is included in the unprinted record on file in the office of the Clerk (Tr. 4852-5077).

The court below thus appears to have assumed the responsibility for making the overriding policy determination that, at least in the absence of some extraordinary justification, no power reactor is to be located in an area having a population density comparable to that found here.

First. The court plainly indicated that it considered the population distribution around the site to be the single disqualifying factor. It did not merely say that the potential extent of the harm which could theoretically result from an accident as a result of the population around a reactor location must be given due weight in determining whether the degree of protection provided against such accident by the "final design" of the reactor is adequate. That issue is not presented at this stage of the proceedings. The court's decision as a practical matter appears to direct the Commission simply not to locate *any* power reactor in an area of population density comparable to that found here, regardless of safeguards which may be provided and evaluated by the Commission as adequate, unless some "compelling reasons" for such location can be found. The imposition of such an arbitrary limitation usurps the Commission's function in the very field in which its expertise is of particular importance, puts in jeopardy all other comparable licenses and permits thus far issued, and would as a practical matter seriously retard the further development of nuclear reactors for the generation of electric power.

The exclusion area and population distribution around this reactor approximate those which the Commission has approved for other comparable power reactors. Appendix A to this petition (pp. 40-41 below) lists such relevant data as is publicly available with respect to all nine power reactors authorized thus far to be constructed or operated under the Act. Also listed are some four other comparable power reactors owned by the Commission (and therefore not required to be licensed) and built or being built in connection with publicly or privately owned electric generating facilities. Examination of these data will show that a number of these projects are larger or located in more populous areas than is the PRDC reactor, or both. A few

have slightly more favorable environmental characteristics in this particular. None, however, is located in the desert or other truly unpopulated area, several are placed as close or closer to metropolitan centers, and nearly all of them have substantially comparable population distribution characteristics. Reports on these projects are annually submitted to the Joint Congressional Committee on Atomic Energy in accordance with the provisions of Section 202 of the Act.[15]

Second. If Congress had intended to forbid the Commission to approve power reactors located in other than remote areas except under compelling or extraordinary circumstances, it would certainly have said so in specific terms. Nothing in the Act's provisions indicates such an intent. In view of the extensive hearings held, and of the fact that the Joint Committee on Atomic Energy in 1954 was certainly abreast of nuclear developments as a result of its years of work with the Commission in the administration of the Atomic Energy Act of 1946 [§15(b), 60 Stat. 772], Congress was plainly aware of the theoretical seriousness of a reactor accident and of the availability of containment and other designs to provide adequate protection of the public health and safety against such possible occurrence.[16] With this knowledge at hand, it vested *in the*

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[15] *E.g., Hearings Before the Joint Committee on Atomic Energy on Development, Growth and State of the Atomic Energy Industry*, 86th Cong., 2d Sess. (1960), pp. 14-15, 155-158, 489-90, 494-98, 524, 540-45, 548, 553-55, 556-80, 629-41.

[16] For example, in 1953, Dr. John C. Bugher, then Director, Division of Biology and Medicine, Atomic Energy Commission, testified that the possible or theoretical dangers of power reactors are such that "In the event of a serious disaster, the locality could be very seriously contaminated and would not be suitable for occupation by people for quite a period of time", although he believed that reactors could be so designed as to provide adequate protection against such an occurrence. *Hearings Before the Joint Committee on Atomic Energy on Atomic Power Development and Private Enterprise*, 83rd Cong., 1st Sess. (1953), pp. 32-34. An eminent physicist, Dr. Edward Teller, in a letter of July 23, 1953 to the Chairman of the Joint Committee on Atomic Energy, similarly indicated con-

Commission the authority to evaluate the various complex technical factors involved in approving reactor location.[17]

The legislative history of the 1954 Act shows that Congress was also quite aware that large reactors would be located, as in fact they have been, reasonably near large metropolitan centers. For example, Mr. Eugene Zuckert, then a member of the Atomic Energy Commission, testified at hearings on the bill in 1954 that large nuclear power plants (100,000 to 300,000 kilowatts or more) "are likely to be built first near heavy power-consuming centers", which he further described as "near but not in" metropolitan and industrial centers. II *Legis. Hist.* 2220. See also statement of Commissioner Smyth, *id.* at 2208.

In the debates Senator Lehman referred to such testimony when he noted that "the first nuclear reactors for power-producing purposes would very likely be erected in New York State, near the great centers of population in my State". III *Legis. Hist.* 3461. Senator Hennings voiced a similar understanding, that it was contemplated that "in the future, atomic-energy reactors of various sizes and capacities could be located in any city or town or, for that matter, in a barren field anywhere in the Middle West, as well as any place in the country." III *Legis. Hist.* 3681. Specific reference was made to proposed large power and test reactors, including the Shippingport reactor, since completed and now in operation at Shippingport, Pennsyl-

ceivable or possible fission product contamination of areas and populations around large reactors comparable to those subsequently elucidated in greater detail in the Brookhaven Report, quoted by the court below. He noted that it had therefore been the practice "to recommend the observance of exclusion distances, that is, to exclude the public from areas around reactors, the size of the area varying in appropriate manner with the amount of radioactive poison that the reactor might release". He obviously considered this a complex technological problem incapable of solution by arbitrary rules of thumb, and noted that in his opinion "reactors of sufficiently safe types might be developed in the near future." *Id.* at p. 633.

[17] See especially Section 161 i (3), which specifically empowers the Commission by regulation or order to fix "standards and restrictions governing the design, location, and operation" of authorized facilities, so as to "protect health and to minimize danger to life or property" (App. C, pp. 59-60).

vania, some 30 miles from the center of Pittsburgh (further described in Appendix A, p. 41, below). III *Legis. Hist.* 3660; Sen. Rep. No. 1699, I *Legis. Hist.* 751. See also III *Legis. Hist.* 3073.

Not only did these proposals evoke no statutory prohibition on the Commission's power to approve such projects, or to approve them only in extraordinary or compelling cases, but Congress actually wrote into Section 104 b of the Act a mandate to the Commission to lend developmental projects such as this one every encouragement and to impede them by a minimum of regulation (App. C, p. 58, below). The restriction imposed by the decision below constitutes a roadblock to nuclear progress of the very type which Congress in Section 104 b enjoined the Commission—and *a fortiori* the courts—not to erect. As Commissioner Zuckert properly pointed out in the 1954 Hearings on the Act (p. 29, above), if reactors are to be developed for the economic central station generation of electric power, they must be located, like most large conventional power plants, "near but not in" metropolitan and industrial centers.

Third. The alternative holding of the court with respect to reactor location was made on an issue not raised before the Commission or in the petition for review and in the face of an uncontested finding that the site was a suitable one.

On the only safety issue presented below, the respondents' argument was that the Commission had failed to make those findings with respect to the safety of this reactor at its proposed location which were claimed to be required by the regulations and the statute prior to issuance of a construction permit (discussed above, pp. 13-25).[18] No contention was advanced at any time that the site was unsuitable for *any* reactor of comparable size, or that the Commission must justify approval of such a location by finding "compelling reasons" for its selection.[19]

[18] See "Statement of Points" in respondents' Brief in Court of Appeals, p. 10 (filed with Clerk of this Court).

[19] At the hearing before the Commission the respondents contended that, because of the nature of this particular reactor, it or a prototype should first have been tested out in a remote location. On the basis of the evidence the Commission made a finding, not attacked here, that such a prototype had not been shown to be

Apart from the implications of such a contention, a valid explanation of why it was not urged to the court below is found in the fact that the Commission made plain, unambiguous and uncontested findings that this site *is* suitable for a power reactor of such size and type. In addition to the finding of reasonable assurance that a reactor of the general type proposed can be operated "at the location" without undue risk (Finding 22, Tr. 7020), the Commission also found that

> "There is reasonable assurance that the proposed site is generally suitable for a reactor of the type and size described in the Application, if the reactor is otherwise shown to be capable of operation without undue risk to the public health and safety, including demonstrations of stability and adequate containment" (Finding 32, Tr. 7023).[20]

This finding is neither quoted nor cited by the court below. Other findings with respect to site, some of which are so quoted, have to do largely with the development of further data with respect to meteorology, hydrology and

necessary (Finding 17, Tr. 7018). At no time did respondents question the suitability of the location for a power reactor as such. Compare *United States* v. *Tucker Truck Lines, Inc.*, 344 U.S. 33, 36-37; *Federal Power Commission* v. *Colorado Interstate Gas Co.*, 348 U.S. 492, 498-501.

[20] See also Finding 21, Tr. 7020. As the Brookhaven Report and the testimony referred to in the court's opinion recognize, it is undisputed that the potential or conceivable danger from any reactor lies not in the possibility of explosion or blast but in the accidental release to the environment of toxic fission products accumulated in it; every reactor creates such fission products in the course of operation, and their potential quantity is primarily a function of its size or power and secondarily of its general type. Tr. 3001-02, 3960, 3962-63. Hence, in initially approving the suitability of a site, the Commission must evaluate it, as it did here, in terms primarily of the size and type of the proposed reactor. Once the site is so approved, of course, the particular reactor must also be shown to be so designed, built and tested as to provide adequate protection against the possibility of release of fission products which it contains, or as the Commission put it here, that "no credible accident can release significant quantities of fission products into the atmosphere" (Finding 21, Tr. 7020).

the like. These data could indicate the necessity for additional protective measures or operating restrictions, but the undisputed testimony is that such further information, by its nature, could not render the site unsuitable for a large power reactor.[21] Hence the Commission's finding that the site was suitable for a reactor of this size and type, provided with adequate protective structures and devices, was definitive. As noted above, respondents chose in their petition for review in the court below not to attack this or any of the other safety findings as not supported by the evidence.

III

THE COMMISSION'S ORDER NEITHER "AGGRIEVES" THESE RESPONDENTS NOR IS IT "FINAL" AS TO THEM. IN HOLDING IT REVIEWABLE, THE COURT BELOW HAS RENDERED A DECISION IN CONFLICT WITH PRINCIPLES LAID DOWN BY THIS COURT AND ACCEPTED IN OTHER CIRCUITS.

Section 189 b of the Atomic Energy Act of 1954 (App. C, pp. 62-63) makes final orders of the Commission reviewable in accordance with the provisions of the Judicial Review Act of December 29, 1950, and of the Administrative Procedure Act. Sections 2 and 4 of the Judicial Review Act in turn give designated courts of appeals jurisdiction to review such final orders at the instance of "any party aggrieved" (App. C, pp. 63-64). Section 10 of the Administrative Procedure Act contains comparable provisions (*id.* at pp. 64-66).

Interpreting generally similar judicial review provisions of the Federal Communications Act, this Court has said that "jurisdiction depends upon standing to seek review and upon ripeness". *United States* v. *Storer Broadcasting Co.*, 351 U.S. 192, 197. Unless the Commission's order ag-

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[21] Tr. 3359-60, 4259 (not printed). The testimony is also undisputed that the extensive meteorological and other site data which the Commission requires prior to authorizing reactor operation and determining any limitations thereon, is information which, by its nature, takes several years to accumulate and in practically every instance is not fully available at the outset of construction but must be gathered as construction progresses. See *e.g.*, Tr. 3804, 4258-59 (not printed).

grieves or adversely affects the respondents, and unless it is final or "ripe" as to them, the court below had no jurisdiction to entertain their petition for review.

Admittedly, the only interest which the respondents here are entitled to protect is that of their members located in the general vicinity of the proposed reactor in not having their safety or property subjected to unreasonable hazard from its *operation*. The Commission found and the opinion below acknowledges that there has been no showing of injury from construction alone—the only activity authorized by the provisional construction permit. And before there can be any operation there must be a further hearing in which PRDC will have the burden of proof and in which the respondents may participate, and there must be a new decision, on the issue of the safety of operation of the plant as it is finally completed and tested.[22] The Commission made it as clear as it could that "[b]efore we authorize the issuance of an operating license to PRDC at a further reopening of this proceeding we will require that all safety questions be answered to our complete satisfaction, as required by the statute and our regulations" (Tr. 6938).

There is thus interposed between the Commission's construction permit order and any event which can adversely affect or aggrieve the respondents the necessity for a further proceeding, a new determination by the Commission on further evidence to be adduced, and a new order, all of which will be subject to further judicial review on the record then made. Under these circumstances the Commission's order complained of is not final or "ripe" as to these respondents, and because it is not ripe the order

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[22] See Findings 36, 37, Tr. 7023-24. This is further required by Section 189 a of the Act (as amended in 1957, 71 Stat. 579) which provides that "[t]he Commission shall hold a hearing after thirty days' notice and publication once in the Federal Register on each application under Section 103 or 104 b for a license for a facility. . . ." This was intended to include specifically the issuance of an operating license, and the Commission has uniformly so interpreted it. See also H. Rep. 435, 85th Cong., 1st Sess. (1957), p. 25.

itself does not now adversely affect or "aggrieve" them.[23]

This Court has made it plain that agency orders are not reviewable "unless and until they impose an obligation, deny a right or fix some legal relationship as a consummation of the administrative process." *Chicago & So. Air Lines, Inc.* v. *Waterman S.S. Corp.*, 333 U.S. 103, 113. They are not reviewable if "the complainant's rights are affected only on the contingency of future administrative action." *Columbia Broadcasting System, Inc.* v. *United States*, 316 U.S. 407, 420, citing *United States* v. *Los Angeles & S.L.R. Co.*, 273 U.S. 299, 309, 310; *cf. Eccles* v. *Peoples Bank of Lakewood Village*, 333 U.S. 426, 432-34. As a different division of the court below has succinctly put it, judicial review of such unripe orders is denied because "[i]t may well be, for all we are shown, that the [agency's] ultimate action will completely dispel every prospective fear voiced by" the complainant. *Associated Banning Co.* v. *United States*, 101 App. D.C. 151, 155, 247 F.2d 557, 561 (1957) (Miller, Danaher, Washington, JJ). Accord: *Howard Terminal* v. *United States*, 239 F.2d 336 (9th Cir. 1956).[24] In

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[23] Admittedly the plain language of Section 189 provides for judicial review of construction permit orders *if* they are "final" and result in "aggrievement". Many such construction permit orders would plainly meet these tests (*e.g.*, denial of a permit, grant of one of two conflicting permits, inclusion in a permit of an unacceptable condition, and the like). It is also undisputed that the respondents' interests could be sufficiently affected by actual operation of the proposed reactor to give them standing to review an order granting such authorization. No such order, of course, is involved here.

[24] The Court of Appeals for the Seventh Circuit has similarly held that, in order to be "aggrieved" within the meaning of these statutes, a party must show that the portions of the order complained of do genuine injury to his interests, so that his substantial rights have been or will be invaded by it; "[i]t is not sufficient that plaintiff as a member of the public desires a law to be correctly administered." *Railway Express Agency* v. *Kennedy*, 189 F. 2d 801, 804-05 (7th Cir. 1951), *cert. denied*, 342 U.S. 830. Other panels of the Court of Appeals for the District of Columbia Circuit have followed these same principles. *E.g.*, *Cincinnati Gas & Elec. Co.* v. *Federal Power Commission*, 101 App. D.C. 1, 7, 246 F. 2d 688, 694

its opinion the Commission itself made a determination, not excepted to on review, that its order issuing a provisional construction permit to PRDC "does not in any manner adversely affect the health and safety of the public or that of" the respondents (Tr. 6964). Compare *Panhandle Eastern Pipe Line Co.* v. *Federal Power Commission*, 219 F.2d 729 (3d Cir. 1955), *cert. denied*, 349 U.S. 945; *Interstate Electric, Inc.* v. *Federal Power Commission*, 164 F.2d 485, 485-86 (9th Cir. 1947).

The court below recognized that respondents had not claimed that construction alone would injure them. It nevertheless held the Commission's order reviewable on the theory that "construction would cause operation, and operation would cause injury" (App. B, p. 44). It based this conclusion on the Commission's findings (made in compliance with Section 50.35 of its regulations) of "reasonable assurance" that omitted technical information will be supplied and will prove to be sufficient to justify issuance of an operating license (Findings 31, 33, Tr. 7022-23). This, the court below said, makes it "probable, in a high degree, that if the construction permit stands PRDC will get an operating license" (App. B, p. 45). This in turn, the court said, makes the Commission's order now reviewable at the instance of these respondents.

It can readily be agreed that the Commission properly found a probability that the extensive research and development programs being conducted in connection with construction of the reactor will produce sufficient confirmation of its safety to permit it to be operated. The whole concept of Section 50.35 of the regulations is that, in order to justify issuance of a provisional construction permit, and to discourage projects that appear to have relatively little chance of success, the Commission must find "reasonable assurance" that the requisite technical data will be produced. The probability that it will prove possible to make the required showing of safety, however, is a

(1957) (Miller, Danaher, Bastian, JJ); *Aircoach Transport Ass'n* v. *Civil Aeronautics Board*, 103 App. D.C. 107, 255 F. 2d 185 (1958) (Washington, Bastian, Burger, JJ); *Wolff* v. *Benson*, 103 App. D.C. 334, 335, 258 F. 2d 428, 429 (1958) (Prettyman, Washington, Madden, JJ).

very different thing from the probability that the Commission will authorize operation *whether or not* such showing is made. Respondents here could be properly aggrieved by the Commission's order only if they could sustain the burden of showing at least the latter probability.

While the court below appeared to confuse these two questions, the essence of its holding is found in the tenet that, in spite of the uncontested findings of the Commission to the contrary and the unambiguous commitments of PRDC itself, the issuance of this provisional construction permit will inevitably result in possibly overwhelming pressure on the Commission to approve operation of the reactor whether or not this is adequately shown to be safe. As the opinion puts it (App. B, p. 50):

> "The economy cannot afford to invest enormous sums in the construction of an atomic reactor that will not be operated. If enormous sums are invested without assurance that the reactor can be operated with reasonable safety, pressure to permit operation without adequate assurance will be great and may be irresistible."

This is necessarily a suggestion that, as Judge Burger stated it, the members of the Atomic Energy Commission would be likely to disregard their responsibilities and oaths and "would permit an operation dangerous to the public because 40 or 50 million dollars is invested in brick, mortar and steel by men who knew from the outset they were engaged in a scientific gamble" (App. B, p. 54). And, of course, should such a miscarriage occur, "the courts are always in a position to exercise a final and stringent scrutiny on the issue of public safety." (*ibid.*).

The analysis suggested by the court below could in any event have validity only where the ultimate question is one of striking a fine balance between competing economic considerations in a mature industry in which a capital investment made under agency authority might conceivably exert a subtle influence on ultimate agency action. Compare *Community Broadcasting Co.* v. *Federal Communications Commission*, 274 F.2d 753 (App. D.C. 1960). This is the type of situation Senator Humphrey obviously had in mind

when he discussed "pressure" in the colloquy on the Senate floor, discussed above (pp. 20-22). It would have considerably less significance where the ultimate issue is the overriding one of public safety, even in connection with an application for a license for a purely commercial venture under Section 103 of the Act. When applied to the public safety of an admittedly non profit research and developmental project under Section 104 b of the Act, it is submitted that it has no force at all.

A research project by its nature is seeking not to return monetary profit on a capital investment but to push back the frontiers of knowledge. Everyone who undertakes such a project recognizes from the outset that the particular avenue of attack chosen may prove less successful than anticipated; yet if the attack is not made the answer may never be known. Research and experimentation (which in the nuclear field is traditionally and necessarily measured in millions or more) could not be undertaken on any other basis. If the technical information at hand when this reactor has been completed and subjected to stringent non-nuclear testing is not sufficient to enable the Commission to make the required finding that it can be operated, with or without power or other restrictions, in a manner which provides no undue risk to the health and safety of the public, it will certainly not be so operated. In such event, the extensive data obtained, including the knowledge that the particular design is not feasible and an understanding of the reasons therefor, will themselves constitute a valuable contribution to nuclear technology.

It would be hard to find a case in which the record is clearer that no potential pressure of the type feared exists or could be exerted. The Commission dealt with this quite forcefully in its opinion:

> "As we more fully discuss in Part II of this decision, PRDC has been on notice since before the first shovel of dirt was moved that its construction permit is *provisional* upon further demonstration of many technological and financial facts, including the complete safety of the reactor. The Applicant has, in fact, stated on the record that it is going to proceed at first under

only the construction permit so as to develop a background that will support assurance that the reactor can be operated in complete safety, and has stated its intention to seek operation authority only after all necessary facts have been assembled. Since PRDC has recognized the developmental nature of the reactor it is building and since it has expressly waived any commitment for an operating license (if there exists any of the type that the Intervenors [respondents] contend is implied by the construction permit), the possibility that the Commission would be in any way bound cannot be visualized. It would be hard to imagine a case where an applicant would be less able to argue that he had been misled by previous favorable Commission action. Under the circumstances of this case, moreover, and in view of the wording of the provisional construction permit, it is perfectly clear that PRDC is assuming a substantial financial risk with its eyes wide open, and that the generation of any pressure from such ingredients would be quite absurd." (Tr. 6956-57).

Again, respondents did not choose to attack these findings on review.

Under these circumstances, we think it is clear that this order, continuing in effect a provisional construction permit, providing for further review of the matter from time to time, if necessary, and for specific further proceedings in which a complete showing of safety of operation must be made at a new public hearing to be held prior to the issuance of an operating license, is in no sense an order "final" as to these respondents, nor does it "aggrieve" them, within the meaning of the review provisions of the applicable statutes. The petition for review of the Commission's order accordingly should have been dismissed.

CONCLUSION

A majority of the court below has pre-empted the roles of Congress and the Commission by writing into the law its particular ideas of what would be sound atomic energy

policy. It has done so with respect to matters that were not only plainly entrusted to the Atomic Energy Commission's expert discretion by Congress, but that fall in an area which, above all others, requires the evaluation of complex technical information by those specially qualified to do this. If this decision stands it will impede rather than further the plainly declared Congressional purpose of encouraging the most rapid development of the peaceful application of nuclear energy which is consistent with adequate protection of the public health and safety. In holding the provisional construction permit order of the Commission to be now reviewable at the instance of these respondents, the court below has also rendered a decision inconsistent with basic principles of judicial review laid down by this Court and accepted in other circuits.

The petition for certiorari should be granted and the judgment below reversed.

Respectfully submitted,

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AUGUST 12, 1960

APPENDIX A

POPULATION DATA WITH RESPECT TO AUTHORIZED POWER REACTORS[1]

Name of Reactor Project and Thermal Power (megawatts)	Status	Cumulative Population by Distance from Site (miles)					Nearest major city beyond 25 miles
		1[2]	5	10	20	25	
I. Privately Owned Section 104 b Developmental Power Reactors							
Consolidated Edison Co. of N.Y. Indian Point, N.Y. 795 megawatts	under construction CPPR–1, 21 Fed. Reg. 3084 (1956)	3,600	45,000	N.A.	N.A.	New York City limits 24 miles	New York
Commonwealth Edison Co. Morris, Ill. 626 megawatts	in operation CPPR–2, 21 Fed. Reg. 3085 (1956); DPR–2, 24 Fed. Reg. 8121 (1959)	N.A.	2,600	21,100	107,000	192,000	Chicago (downtown) 47 miles
General Electric Company Vallecitos, Calif. 30 megawatts	in operation CPPR–3, 21 Fed. Reg. 3395 (1956); DPR–1, 22 Fed. Reg. 7187 (1957)	N.A.	N.A.	22,000	N.A.	250,000	San Fran. 33 miles
Power Reactor Dev. Co. Lagoona Beach, Mich. 304 megawatts	under construction CPPR–4, Tr. 6933–7033	175	1,800	31,300	187,000	N.A.	Detroit 30 miles
Yankee Atomic Elec. Co. Rowe, Mass. 392 megawatts	in operation CPPR–5, 22 Fed. R 7188, 9237 (1957); DPR–3, 25 Fed. Reg. 6938 (1960)	174	2,036	28,982	104,293	N.A.	Albany 45 miles
Saxton Nuclear Exp. Proj. Saxton, Pa. 20 megawatts	under construction CPPR–6, 24 Fed. Reg. 9244, 25 *id.* 1471 (1960)	1,769	5,627	18,303	N.A.	Altoona, pop. 86,614, 22 miles	Altoona 22 miles
Carolinas-Va. Nuc. Pwr. Assn. Parr, S.C. 60.5 megawatts	under construction CPPR–7, 25 Fed. Reg. 522, 4206 (1960)	58	725	1,518	N.A.	104,671	Columbia 25 miles

Northern States Power Co. Sioux Falls, S.D. 303 megawatts	under construction CPPR–8, 25 Fed. Reg. 254, 4484 (1960)	N.A.	10,000	Sioux Falls, pop. 60,000 5.5 miles (center)	N.A.	N.A.	
Consumers Power Co. Big Rock Pt., Mich. 240 megawatts	under construction CPPR–9, 25 Fed. Reg. 1699, 5062 (1960)	5	4,964	9,000	26,700	N.A.	Sault Ste. Marie, 85 miles
II. Government Owned Developmental Power Reactors							
Shippingport Atomic Pwr. Stat. Shippingport, Pa. 231 megawatts	in operation since 1957	N.A.	20,000	125,000	(225,000, 0–15 miles)	N.A.	Pittsburgh (center) 30 miles
Rural Coop. Pwr. Assn. Elk River, Minn. 73 megawatts	under construction 24 Fed. Reg. 8280 (1959)	200	2,656	7,700	N.A.	N.A.	Minneapolis-St. Paul, 20–35 miles
City of Piqua Piqua, Ohio 45.5 megawatts	under construction 24 Fed. Reg. 8279 (1959)	4,000	21,000	42,000	N.A.	108,000	Dayton, 28 miles
Consumers Public Pwr. Dist. Hallam, Nebr. 254 megawatts	under construction 25 Fed. Reg. 1998 (1960)	21	1,052	6,768	(Lincoln, pop. 99,000, 19 miles)	N.A.	Omaha 65 miles

Note:

1. All location and power data are taken from Hearings, Joint Committee on Atomic Energy on Development, Growth and State of the Atomic Energy Industry, 86th Cong., 2d Sess. (1960), pp. 579–81. Data concerning the Shippingport reactor are taken from "WAPD–FC–547, Description of Shippingport Atomic Power Station Site and Surrounding Area" (1957) (unclassified). A few of the distances to distant cities are taken from the Rand McNally World Atlas (Premier Edition). The remaining data are derived from the license application or hazards summary reports on file in the AEC Public Document Room for each reactor. *"NA" indicates that the information in question was not readily available in the Public Document Room.*

2. Insofar as data on exclusion areas are available in the AEC Public Document Room, they indicate exclusion areas ranging from 150 acres to 950 acres for the above reactors except in one instance where there is an exclusion area of 1593 acres. The TRDC exclusion area is 915 acres (Exh. XXXIV, Tr. 5792) (not printed).

APPENDIX B

UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 15271

INTERNATIONAL UNION OF ELECTRICAL, RADIO AND MACHINE WORKERS, AFL-CIO; UNITED AUTOMOBILE, AIRCRAFT AND AGRICULTURAL IMPLEMENT WORKERS OF AMERICA; and UNITED PAPERMAKERS AND PAPERWORKERS, PETITIONERS

v.

UNITED STATES OF AMERICA and ATOMIC ENERGY COMMISSION, RESPONDENTS

POWER REACTOR DEVELOPMENT COMPANY, STATE OF MICHIGAN, INTERVENORS

ON PETITION TO REVIEW AN ORDER OF THE ATOMIC ENERGY COMMISSION

Decided June 10, 1960

Mr. Benjamin C. Sigal for petitioners.

Mr. Lionel Kestenbaum, Attorney Atomic Energy Commission, with whom *Assistant Attorney General Doub*, *Messrs. Loren K. Olson*, General Counsel, Atomic Energy Commission, *Courts Oulahan*, Special Assistant to the General Counsel, Atomic Energy Commission, and *Samuel D. Slade*, Attorney, Department of Justice, were on the brief, for respondents.

Mr. W. Graham Claytor, Jr., with whom *Mr. John Lord O'Brian* was on the brief, for intervenor Power Reactor Development Company.

Mr. Jerome Maslowski entered an appearance for intervenor State of Michigan.

Before EDGERTON, BAZELON, and BURGER, *Circuit Judges*.

EDGERTON, *Circuit Judge:* Petitioners seek review of the Atomic Energy Commission's Order of May 26, 1959 which continued in effect, with amendments, a "provi-

sional" construction permit issued August 4, 1956, for a nuclear power reactor. Section 104b of the Atomic Energy Act of 1954 authorizes the Commission to issue licenses for "utilization and production facilities involved in the conduct of research and development activities leading to the demonstration of the practical value of such facilities for industrial or commercial purposes. In issuing licenses under this subsection, the Commission shall impose the minimum amount of such regulations and terms of license as will permit the Commission to fulfill its obligations under this Act to promote the common defense and security and to protect the health and safety of the public. . . ." 68 Stat. 937, 42 U.S.C. § 2134(b).

The holder of the construction permit, intervenor here, is the Power Reactor Development Company (PRDC), a Michigan membership corporation organized "to study, develop, design, fabricate, construct and operate one or more experimental nuclear power reactors . . . to the end that there may be an early demonstration of the practical and economical use of nuclear energy for the generation of electrical energy. . . ." Of PRDC's 21 members, 14 are public utilities and 7 are equipment manufacturers.

The reactor will be the largest, but not the first, "fast breeder" reactor in the United States. The site is at Lagoona Beach, Monroe County, Michigan, on the shore of Lake Erie, 30 miles southwest of Detroit.

Petitioners' Standing

We cannot review the Commission's order at petitioners' request unless (1) it is a "final order" and (2) petitioners are "aggrieved" by it. Atomic Energy Act of 1954, § 189, 42 U.S.C. §2239(b); 5 U.S.C. §§ 1032, 1034. Although the Commission's action of May 26, 1959 was entitled "Commission's Opinion, Final Decision and Order," the Commission and PRDC now contend that the order was not final. They also contend that it did not aggrieve the petitioners. In our opinion it was what it purported to be, a final order, and petitioners are "aggrieved" by it. Because it threatens them with economic injury, they "had the requisite standing to appeal and to raise . . . any relevant question of law in respect of the order . . . ." *Federal Communications Commission* v. *Sanders Brothers Radio Station*, 309 U.S. 470, 477.

Petitioners are national or international labor unions which intervened, with some of their members, in the proceedings before the Commission, on the basis that "grant-

ing the conditional construction permit herein (1) is a violation of the provisions of the Atomic Energy Act of 1954, and the regulations pursuant thereto adopted by the Commission . . . and (2) will result in the construction of a reactor which, under present technological conditions, is inherently unsafe, and which will thereby create a hazard which will place the individual Intervenors, the members of the UAW and their families, and the UAW in danger of an explosion or other incident" damaging to the individuals and their homes, real estate values, and employment; that the value of collective bargaining contracts "will be seriously impaired if the PRDC reactor is built in this area without reasonable assurances of safety"; and that there are "reasonable grounds for relief that a license to operate said facility when it is completed, with an expenditure of $45,000,000 will be issued without proper consideration of and regard for the health and safety of the public."

In their reply brief in this court, petitioners contend that "The fear of a possible atomic catastrophe, in itself, before any operation would begin, would among other things have the effect of depressing values of property owned by the Petitioners, and would cause plants in which they work under collective bargaining agreements to move and thereby cause a loss of employment." Their reply brief asserts that "the uncontroverted allegations of their petition for intervention before the Commission set forth the economic injury they would suffer merely from the construction of the reactor itself." But we find no such allegations in their petition for intervention before the Commission. The theory of that petition was that construction would cause operation, and operation would cause injury, not that construction without operation would cause injury.[1] Judicial review is limited to the record before the Commission. 5 U.S.C. § 1037(a).

As the Commission says in its order, "a construction permit is a step toward a license rather than the equivalent thereof. . . . This permit is provisional to the extent that a license authorizing operation of the facility will not be issued by the Commission unless PRDC has submitted to the Commisssion (by proposed amendment to the Application) the complete, final Hazards Summary

[1] It is undisputed that construction without operation will cause no *physical* injury or danger not involved in the erection of any large building.

Report (portions of which may be submitted and evaluated from time to time), and the Commission has found that the final design provides reasonable assurance that the health and safety of the public will not be endangered by operation of the facility in accordance with the specified procedures. It is further provisional to the extent that the Commission reserves jurisdiction, at any time prior to issuance of an operating license, upon notice to the parties herein, to reopen this proceeding for the purpose of receiving additional evidence, and to make such determinations and take such action with respect to the continuance, vacation, or modification of this permit as the entire record warrants." But the order also says: "There is reasonable assurance that theoretical and experimental programs under way will develop sufficient data to justify the issuance of an operating license, and that the results of these programs will be available prior to the time it is necessary for the Commission to rule on the operating aspect of the PRDC license Application." PRDC says "it must be taken as settled . . . that the further technical information needed to complete the PRDC application for license will be supplied." Although this positive prediction overstates the matter, it is plainly probable, in a high degree, that if the construction permit stands PRDC will get an operating license and will operate. We think petitioners are therefore aggrieved by the issuance of the permit.

Safety Findings Required by the Atomic Energy Act

Petitioners contend that "The Act and the regulations of the Commission . . . require, as conditions precedent to the issuance of every construction permit for an atomic energy power reactor, that *as of the time the construction permit is issued* the Commission find that (1) it has reasonable assurance that the reactor may be constructed *and operated* at the proposed site without undue risk to the health and safety of the public . . . ."

It is undisputed that the Commission must make such a finding when it authorizes operation. The question is whether it must make such a finding when it authorizes construction. In our opinion it must.

Section 182 of the Atomic Energy Act of 1954, which is headed "License applications", provides in paragraph (a): ". . . In connection with applications for licenses to operate production or utilization facilities, the applicant shall state such technical specifications, including . . .

the place of the use . . . and such other information as the Commission may, by rule or regulation, deem necessary in order to enable it to find that the utilization or production of special nuclear material . . . will provide adequate protection to the health and safety of the public. Such technical specifications shall be a part of any license issued. . . ." 42 U.S.C. § 2232(a).

It seems to be unquestioned that the phrase used in § 182, "adequate protection to the health and safety of the public", and the Commission's phrase, "without undue risk to the health and safety of the public", are substantially equivalent.

Section 185 of the Act, which is headed "Construction permits", provides: "All applicants for licenses to construct or modify production or utilization facilities shall, if the application is otherwise acceptable to the Commission, be initially granted a construction permit. . . . Upon the completion of the construction or modification of the facility, upon the filing of any additional information needed to bring the original application up to date, and upon finding that the facility authorized has been constructed and will operate in conformity with the application as amended and in conformity with the provisions of this chapter and of the rules and regulations of the Commission, and in the absence of any good cause being shown to the Commission why the granting of a license would not be in accordance with the provisions of this Act, the Commission shall thereupon issue a license to the applicant. For all other purposes of this Act a construction permit is deemed to be a 'license'." 42 U.S.C. § 2235.

While the bill was pending, Senator Humphrey proposed, and withdrew, an amendment which would have added after the word "license", at the end of § 185: ", and no construction permit shall be issued by the Commission until after the completion of the procedures established by Section 182 for the consideration of applications for licenses under this act." (100 CONG. REC. 11566 (1954); Legislative History of the Atomic Energy Act of 1954, Vol. III, p. 3759; Vol. I, p. 733) He said: "*The purpose of the amendment* when it was prepared *was to make sure that the construction of a facility was not permitted prior to the authorization of a license,* because had that been done what it would have amounted to would be getting an investment of a substantial amount of capital, which surely would have been prejudicial in terms

of the Commission issuing the license. In other words, if the Commission had granted the construction permit for some form of nuclear reactor, and then the question of a license was not fully resolved, surely there would have been considerable pressure, and justifiably so, for the Commission to have authorized the license once it had authorized the permit for construction.

"The chairman of the committee tells me he has modified certain sections by the committee amendments to the bill, of which at that time I was not aware. *The chairman indicates to me that under the terms of the bill, as amended, the construction permit is equivalent to a license.* In other words, as I understand, under the bill a construction permit cannot be interpreted in any other way than being equal to or a part of the licensing procedure. Is that correct?" Senator Hickenlooper, the manager of the bill, replied: "The Senator is correct. The staff has worked on this matter. . . . A license and a construction permit are equivalent. . . . Therefore, we believe, and we assure the Senator, that *the amendment is not essential to the problem which he is attempting to reach.*" After some discussion of other sections of the bill, this colloquy occurred: "Mr. HUMPHREY. In other words, the revised sections on judicial review and on hearings and *the revised section 182 on license application all apply directly to construction permits? Mr.* HICKENLOOPER. *Yes.* Mr. HUMPHREY. *With that statement, Mr. President, I withdraw my amendment. The only purpose of the amendment was to clarify that section.* I am grateful to the chairman for having done it before the amendment was considered." (Emphasis added.) (100 CONG. REC. 11566; Legislative History, Vol. III, p. 3759.)[2]

If, as this indicates, § 182 applies "directly to" construction permits, when the Commission issues a construction permit it must "find that the utilization or production of special nuclear material . . . will provide adequate protection to the health and safety of the public"; or, in the Commission's phrase, that the facility can be "operated at the location proposed without undue risk to the health and safety of the public."

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[2] The Commission apparently interprets this colloquy as concerning only the "procedural safeguards" of notice, hearings, and appeal. We cannot so understand it and cannot suppose the Senate so understood it.

The Joint Committee on Atomic Energy said in its report on the bill: "Section 185 permits the Commission to issue construction permits to applicants for a production or utilization facility, describes the terms of the construction permit, and requires the issuance of a license if the construction is carried out in accordance with the terms of the construction permit." (S.Rep.No. 1699, 83d Cong., 2d Sess., 28 (1954); Legislative History, Vol. I, p. 776.) It seems certain that if the Act did not require, as a condition to the issuance of a construction permit, a finding that the proposed facility can be operated without undue risk to the health and safety of the public, the Act would not require the issuance of a license when the permitted construction is carried out.

At the very least it is doubtful whether the Commission's construction of the Atomic Energy Act is correct. The possibilities of harm are so enormous that any doubt as to what findings the Act requires, and any doubt as to whether the Commission made such findings, should be resolved on the side of safety.

The Commission's Safety Findings

In our opinion the Commission's findings regarding safety of operation are not sufficient.

An Initial Decision dated December 10, 1958, contains this unqualified finding: "22. The Commission finds reasonable assurance in the record that a utilization facility of the general type proposed in the PRDC application and amendments thereto can be constructed and will be able to be operated at the location proposed without undue risk to the health and safety of the public." But in the Opinion and Final Decision which accompanied its order of May 26, 1959, by interpolating the phrase we emphasize, the Commission qualified the finding: "22. The Commission finds reasonable assurance in the record, *for the purposes of this provisional construction permit*, that a utilization facility of the general type proposed in the PRDC Application and amendments thereto can be constructed and operated at the location without undue risk to the health and safety of the public." (Emphasis added.) This is not a finding that a facility can be operated there without undue risk. It is a finding that there is sufficient likelihood that a facility can be operated there without undue risk so that, in the Commission's opinion, it is appropriate to issue a "provisional" construction permit.

In our opinion such a finding does not meet the requirements of the Act.

The Commission made other statements which confirm the impression that it no longer found, as it had found in December, reasonable assurance that a facility can be operated at the location without undue risk. The Commission said: "The degree of 'reasonable assurance' with respect to safety that satisfies us in this case for purposes of the *provisional* construction permit would not be the same as we would require in considering the issuance of the *operating* license. . . . It has not been positively established that a fast breeder reactor of the general type and power level proposed by Applicant can be *operated* without a credible possibility of releasing significant quantities of fission products to the environment. . . ." (Emphasis in original.) And again: "*For the purposes of a provisional construction permit*, there is reasonable assurance that a reactor of the general type described in the Application can be so designed that no credible accident in the course of its operation is likely to result in the release of significant quantities of fission products into the atmosphere." (Emphasis added.)

The Commission expressed confidence that future scientific developments would enable it, in the future, to find that the reactor could be operated without undue risk. It said: "There is reasonable assurance that theoretical and experimental programs under way will develop sufficient data to justify the issuance of an operating license, and that the results of these programs will be available prior to the time it is necessary for the Commission to rule on the operating aspect of the PRDC license Application." "There is reasonable assurance that theoretical and experimental investigations which have been undertaken; together with operating experience on one or more of the EBR-I, EBR-II and Dounreay reactors, will establish definitely, prior to the scheduled completion date of the PRDC reactor, whether or not the reactor proposed by Applicant can be so operated"; *i.e.*, whether it can be "operated without a credible possibility of releasing significant quantities of fission products to the environment." Again, "there is reasonable assurance that *evidence will establish* that the reactor proposed by Applicant can be so operated." (Emphasis added.) This clearly implies that *evidence does not now establish* that the reactor can be so operated. The Commission's predictions regarding

the future course of scientific development do not in our opinion satisfy the requirement of the Act.

The Commission said: "It is in the nature of reactor design, although certainly not unique to it, that many features remain to be designed and demonstrated after construction is begun—and indeed some features redesigned and replaced after operation is under way. . . . By proceeding with construction and further research and development simultaneously, rather than awaiting complete research and development results Applicant will save several years in the time required to place in operation its demonstration power reactor." As a matter of policy, there is force in these considerations. But Congress seems to have been more impressed by the opposite policy considerations to which Senator Humphrey, in his colloquy with Senator Hickenlooper, called the attention of the Senate. The economy cannot afford to invest enormous sums in the construction of an atomic reactor that will not be operated. If enormous sums are invested without assurance that the reactor can be operated with reasonable safety, pressure to permit operation without adequate assurance will be great and may be irresistible. PRDC's estimate of the cost of construction, preconstruction research and development, and administrative expenses during construction and test operation was $44,020,000. The Commission found there would probably be "a cost over-run".

In contrast with the Commission's repeated expressions of uncertainty, it used other expressions which might seem to indicate a positive opinion regarding safety of operation. The Opinion and Final Decision, before adverting to the issue of safety and other issues, said broadly: "we amplify and affirm our Opinion and Initial Decision dated December 10, 1958." The Commission also said: "The principal factual issue in this proceeding is whether there is information sufficient to provide a reasonable assurance that a utilization facility of the general type proposed in the PRDC application can be constructed and operated at the location proposed therein without undue risk to the health and safety of the public. Subsidiary to this issue is whether there is reasonable assurance that technical information omitted from, and required to complete, the application will be supplied before issuance of an operating license. A careful evaluation of the entire record in this proceeding can only lead to an affirmative answer to all of these questions." And again: "It is enough for the purposes of the present proceeding (that is, for the issu-

ance of a provisional construction permit), and for the satisfaction of the requirements of the statute and the regulations, that there be reasonable assurance that the reactor can be constructed and operated without undue risk to the health and safety of the public. We conclude that the present state of knowledge as described in the record gives, and the accident possibilities presented on the record do not negate, that assurance."

It results that the Commission's findings regarding safety of operation are ambiguous. In view of the nature, size, and location of the project, we think the findings should be uncommonly free from ambiguity. The Commission should "make the basis of its action reasonably clear. We cannot find that it did so here." *Radio Station KFH Co.* v. *Federal Communications Commission*, 101 U.S.App.D.C. 164, 166, 247 F. 2d 570, 572. "'We must know what a decision means before the duty becomes ours to say whether it is right or wrong.'" *Secretary of Agriculture* v. *United States*, 347 U.S. 645, 654. *Pacific Far East Line, Inc.* v. *Federal Maritime Board*, —— U.S.App.D.C. ——, ——, 275 F. 2d 184, 187.

We think the Commission's safety findings are deficient in an additional respect.

In 1957 the Commission made to the Joint Committee on Atomic Energy "a report of a study of the possible consequences in terms of injury to persons and damage to property, if certain hypothetical major accidents should occur in a typical large nuclear power reactor." All the experts agreed "that the chances that major accidents might occur are exceedingly small." But "Under adverse combinations of the conditions considered, it was estimated that people could be killed at distances up to fifteen miles, and injured at distances of about forty-five miles. Land contamination could extend for greater distances." Undisputed testimony before the Commission shows that there is a "possibility of a major disaster, even though it has a low probability".

As the Commission said, "the question of safety obviously cannot be considered without regard to proposed location." The Commission found: "The site is bordered on one side by water and provides an exclusion area on the land side with a minimum radius of 2900 feet. The population distribution for given distances from the site is as follows: 1 mile, population 175; 2, 600; 5, 1,800; 10, 31,300; 20, 187,100; 30, 2,001,700. During the summer months the population within five miles would be increased

due to vacationing transients and to the fact that beaches two to five miles southwest of the site may be crowded with thousands of people."

We think it clear from the Congressional concern for safety that Congress intended no reactor should, without compelling reasons, be located where it will expose so large a population to the possibility of a nuclear disaster. It does not appear that the Commission found compelling reasons or saw that such reasons were necessary. It said: "The evidence of record with respect to site gives reasonable assurance that the site is satisfactory from structural and underground water flow standpoints. The meteorology of the site is complex, but no reason appears in the record for it to be disqualifying. The site makes possible extensive safeguards against the inadvertent release of liquid contaminants. . . . Studies of weather, hydrology, geology, and similar problems have yielded considerable information and are still in progress. Although the data of these types are not yet complete or conclusive, the record gives reasonable assurance that safe operation of the reactor will be as likely in that location as in any other location."[3] We think this finding clearly insufficient. We need not consider whether even the most compelling reasons for preferring this location could support a finding that the reactor could be operated at this location without "undue" risk, or with "adequate" protection, to the health and safety of the public.

Because we think the safety findings insufficient, we must set aside the Commission's grant of a construction permit and remand the case for such further proceedings consistent with this opinion as the Commission may determine. We need not consider other points raised by the petitioners.

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[3] The Commission continued: "We anticipate that knowledge to be acquired will fortify that assurance. . . . It is possible that there may be presently unknown effects in large fast reactor systems. A prototype of the proposed reactor at a remote location has been urged as affording greater assurance against the possibility of such unknown effects than does the presently planned experimental and theoretical programs. (sic) The Commission finds that the necessity, however, for constructing such a prototype has not been shown. If the program of meltdown investigation should prove inconclusive, it will be necessary to reconsider the question of need for a prototype."

BURGER, *Circuit Judge, dissenting:* I dissent because I think there is no occasion at this time for the court to reach the issue of the ultimate safety of the plant's operations. The Commission has issued only a provisional permit to build a plant, not to operate it. The plant cannot go into operation until and unless the intervenor PRDC meets the safety provisions of the Act.

The sole basis of challenge to the provisional construction permit is that the *future possibility* that an operating permit will be unlawfully and improperly issued by the Commission creates a "present," "immediate" and "unavoidable threat" of injury. I do not think we have any occasion to consider what is not now before us. The Commission expressly deferred action on that issue. This does not appear to me a "final order" which gives us jurisdiction to pass on the ultimate issue of safety; nor does it empower us to tell the Commission that it must pass on the ultimate safety of the operaion before the plant is constructed. Orders are not final as to a person "unless and until they impose an obligation, deny a right or fix some legal relationship as a consummation of the administrative process." *Chicago & Southern Air Lines, Inc.* v. *Waterman Steamship Corp.*, 333 U.S. 103, 113 (1948).

In an area involving as much scientific uncertainty as development of nuclear energy for peaceful purposes, the Commission must be permitted to proceed step by step, *i.e.*, make its preliminary finding of probable safety when the construction permit issues and reserve final approval of operations until a later date.

I respectfully suggest that my colleagues are undertaking to assume responsibilities which Congress vested in the Commission. This is illustrated in the majority's statement

> "No reactor should, without compelling reasons, be located where it will expose so large a population to the possibility of a nuclear disaster."

On what evidence does the majority make a finding of "nuclear disaster" directly opposed to the finding which the Atomic Energy Commission made? The majority is, in effect, telling the Atomic Energy Commission that it has made an *unwise* decision on the location of the plant.

The majority also goes beyond the established limits of judicial review when it states:

> "The economy cannot afford to invest enormous sums in the construction of an atomic reactor that will not

be operated. If enormous sums are invested without assurance that the reactor can be operated with reasonable safety, pressure to permit operation without adequate assurance will be great and may be irresistible."

From an erroneous premise drawn out of thin air, the majority proceeds to draw an unwarranted conclusion. On what evidence can we as judges say our "economy cannot afford," or even that these appellees cannot afford, this large investment for peaceful uses of nuclear energy? I suggest our entire history is to the contrary. We invested not mere millions but *billions* in the original development of nuclear fission on a totally unproven theory of physics. It was an act of faith in the views of scientists. Surely it cannot be seriously suggested that these giants of American industry which formed PRDC are not well able—and willing—to risk the loss of millions in experiments and research. Forty or fifty million dollars to the sponsors of PRDC is a small investment to risk for the world's first known experiment of this kind into peaceful uses of nuclear energy.

If we were dealing with a radio or TV license or some other purely commercial enterprise in a developed and mature industry I would agree that there is a risk that large investment in machines might conceivably exert a subtle influence on the ultimate grant of an operations permit. Cf. *Community Broadcasting Co.* v. *Federal Communications Commission*, Nos. 15313, 15314 (D.C.Cir., Feb. 8, 1960). But I cannot join in the suggestion that members of the Atomic Energy Commission who have assumed obligations under oaths as binding as ours would permit an operation dangerous to the public because 40 or 50 million dollars is invested in brick, mortar and steel by men who knew from the outset they were engaged in a scientific gamble. And if any administrative agency should so abdicate its responsibilities in a matter as grave as this—which I cannot believe is likely—the courts are always in a position to exercise a final and stringent scrutiny on the issue of public safety.

Development in an area like this must, of necessity, proceed step by step. The Commission has found that the issuance of the construction permit on a provisional and restricted basis "does not in any manner adversely affect the health and safety of the public or that of the [petitioners]." The appellants do not attack this finding.

At this stage how can anyone know what the result will be? This court considered a challenge not unlike that of appellants' challenge in *Associated-Banning Co.* v. *United States*, 247 F.2d 557, 561 (1957): "We cannot assume that the Board will not conduct its hearing within the intendment of the Act, so far as it may apply. It may well be, for all we are shown, that the Board's ultimate action will completely dispel every prospective fear voiced by the protest and the complaint. It is clear that the Board has not as yet entered an order 'final' as to these petitioners."

The essence of the majority action is found in its acceptance of the idea that once the Commission has permitted PRDC to invest its millions in the plant they are "bound" or "likely" to relax their notion of what is safe or dangerous in order to bail out the investors.

I emphasize that I cannot for a moment believe the sponsors of PRDC are so naive that they would think their investment of these millions is not speculative just as is most research. Nor can I believe they think that any amount of invested capital will persuade the Atomic Energy Commission to make a finding of safety which is not supported by substantial scientific evidence. It is entirely possible that PRDC might find itself the owner of a 50 million dollar scientific "white elephant" if, after completion of construction, it cannot satisfy the safety standards of the statute. Should that be the case it will be simply one of the unproductive steps in what promises to be a program to open to mankind sources of power undreamed of only a few years ago.

APPENDIX C

I. Pertinent Provisions of Statutes

1. ATOMIC ENERGY ACT OF 1954, AS AMENDED, SECTIONS 1, 3a, d, 101, 102, 103, 104, 161 b, i, p, 182, 185, 189, 202, 68 STAT. 924, 922, 936, 937, 948, 953, 955, 956, 70 STAT. 1070, 1071 71 STAT. 579, 42 U.S.C. §§ 2011, 2013(a), (d), 2131, 2132, 2133, 2134, 2201(b), (i), (p), 2232, 2235, 2239, 2252.

Section 1. Declaration.—Atomic energy is capable of application for peaceful as well as military purposes. It is therefore declared to be the policy of the United States that—

a. the development, use, and control of atomic energy shall be directed so as to make the maximum contribution to the general welfare, subject at all times to the paramount objective of making the maximum contribution to the common defense and security; and

b. the development, use, and control of atomic energy shall be directed so as to promote world peace, improve the general welfare, increase the standard of living, and strengthen free competition in private enterprise.

* * * *

Sec. 3. Purpose.—It is the purpose of this Act to effectuate the policies set forth above by providing for—

a. a program of conducting, assisting, and fostering research and development in order to encourage maximum scientific and industrial progress;

* * * *

d. a program to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and security and with the health and safety of the public;

* * * *

Sec. 101. License Required.—It shall be unlawful, except as provided in section 91, for any person within the United States to transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess, use, import, or export any utilization or production facility except under and in accordance with a license issued by the Commission pursuant to section 103 or 104.

SEC. 102. FINDING OF PRACTICAL VALUE.—Whenever the Commission has made a finding in writing that any type of utilization or production facility has been sufficiently developed to be of practical value for industrial or commercial purposes, the Commission may thereafter issue licenses for such type of facility pursuant to section 103.

SEC. 103. COMMERCIAL LICENSES.—

a. Subsequent to a finding by the Commission as required in section 102, the Commission may issue licenses to transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess, use, import, or export under the terms of an agreement for cooperation arranged pursuant to section 123, such type of utilization or production facility. Such licenses shall be issued in accordance with the provisions of chapter 16 and subject to such conditions as the Commission may by rule or regulation establish to effectuate the purposes and provisions of this Act.

b. The Commission shall issue such licenses on a nonexclusive basis to persons applying therefor (1) whose proposed activities will serve a useful purpose proportionate to the quantities of special nuclear material or source material to be utilized; (2) who are equipped to observe and who agree to observe such safety standards to protect health and to minimize danger to life or property as the Commission may by rule establish; and (3) who agree to make available to the Commission such technical information and data concerning activities under such licenses as the Commission may determine necessary to promote the common defense and security and to protect the health and safety of the public. All such information may be used by the Commission only for the purposes of the common defense and security and to protect the health and safety of the public.

c. Each such license shall be issued for a specified period, as determined by the Commission, depending on the type of activity to be licensed, but not exceeding forty years, and may be renewed upon the expiration of such period.

d. No license under this section may be given to any person for activities which are not under or within the jurisdiction of the United States, except for the export of production or utilization facilities under terms of an

agreement for cooperation arranged pursuant to section 123, or except under the provisions of section 109. No license may be issued to an alien or any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government. In any event, no license may be issued to any person within the United States if, in the opinion of the Commission, the issuance of a license to such person would be inimical to the common defense and security or to the health and safety of the public.

SEC. 104. MEDICAL THERAPY AND RESEARCH AND DEVELOPMENT.—

a. The Commission is authorized to issue licenses to persons applying therefor for utilization facilities for use in medical therapy. In issuing such licenses the Commission is directed to permit the widest amount of effective medical therapy possible with the amount of special nuclear material available for such purposes and to impose the minimum amount of regulation consistent with its obligations under this Act to promote the common defense and security and to protect the health and safety of the public.

b. The Commission is authorized to issue licenses to persons applying therefor for utilization and production facilities involved in the conduct of research and development activities leading to the demonstration of the practical value of such facilities for industrial or commercial purposes. In issuing licenses under this subsection, the Commission shall impose the minimum amount of such regulations and terms of license as will permit the Commission to fulfill its obligations under this Act to promote the common defense and security and to protect the health and safety of the public and will be compatible with the regulations and terms of license which would apply in the event that a commercial license were later to be issued pursuant to section 103 for that type of facility. In issuing such licenses, priority shall be given to those activities which will, in the opinion of the Commission, lead to major advances in the application of atomic energy for industrial or commercial purposes.

c. The Commission is authorized to issue licenses to persons applying therefor for utilization and produc-

tion facilities useful in the conduct of research and development activities of the types specified in section 31 and which are not facilities of the type specified in subsection 104b. The Commission is directed to impose only such minimum amount of regulation of the licensee as the Commission finds will permit the Commission to fulfill its obligations under this Act to promote the common defense and security and to protect the health and safety of the public and will permit the conduct of widespread and diverse research and development.

d. No license under this section may be given to any person for activities which are not under or within the jurisdiction of the United States, except for the export of production or utilization facilities under terms of an agreement for cooperation arranged pursuant to section 123 or except under the provisions of section 109. No license may be issued to any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government. In any event, no license may be issued to any person within the United States if, in the opinion of the Commission, the issuance of a license to such person would be inimical to the common defense and security or to the health and safety of the public.

* * * * *

SEC. 161. GENERAL PROVISIONS.—In the performance of its functions the Commission is authorized to—

* * * * *

b. establish by rule, regulation, or order, such standards and instructions to govern the possession and use of special nuclear material, source material, and byproduct material as the Commission may deem necessary or desirable to promote the common defense and security or to protect health or to minimize danger to life or property;

* * * * *

i. prescribe such regulations or orders as it may deem necessary (1) to protect Restricted Data received by any person in connection with any activity authorized pursuant to this Act, (2) to guard against the loss or diversion of any special nuclear material acquired by any person pursuant to section 53 or produced by

any person in connection with any activity authorized pursuant to this Act, and to prevent any use or disposition thereof which the Commission may determine to be inimical to the common defense and security, and (3) to govern any activity authorized pursuant to this Act, including standards and restrictions governing the design, location, and operation of facilities used in the conduct of such activity, in order to protect health and to minimize danger to life or property;

* * * * *

p. make, promulgate, issue, rescind, and amend such rules and regulations as may be necessary to carry out the purposes of this Act;

* * * * *

SEC. 182. LICENSE APPLICATIONS.—

a. Each application for a license hereunder shall be in writing and shall specifically state such information as the Commission, by rule or regulation, may determine to be necessary to decide such of the technical and financial qualifications of the applicant, the character of the applicant, the citizenship of the applicant, or any other qualifications of the applicant as the Commission may deem appropriate for the license. In connection with applications for licenses to operate production or utilization facilities, the applicant shall state such technical specifications, including information of the amount, kind, and source of special nuclear material required, the place of the use, the specific characteristics of the facility, and such other information as the Commission may, by rule or regulation, deem necessary in order to enable it to find that the utilization or production of special nuclear material will be in accord with the common defense and security and will provide adequate protection to the health and safety of the public. Such technical specifications shall be a part of any license issued. The Commission may at any time after the filing of the original application, and before the expiration of the license, require further written statements in order to enable the Commission to determine whether the application should be granted or denied or whether a license should be modified or revoked. All applications and statements shall be signed by the applicant or licensee. Appli-

cations for, and statements made in connection with, licenses under sections 103 and 104 shall be made under oath or affirmation. The Commission may require any other applications or statements to be made under oath or affirmation.

b. The Advisory Committee on Reactor Safeguards shall review each application under section 103 or 104 b. for a license for a facility, any application under section 104 c. for a testing facility, and any application under section 104 a. or c. specifically referred to it by the Commission, and shall submit a report thereon, which shall be made part of the record of the application and available to the public, except to the extent that security classification prevents disclosure.[1]

c. The Commission shall not issue any license for a utilization or production facility for the generation of commercial power under section 103, until it has given notice in writing to such regulatory agency as may have jurisdiction over the rates and services of the proposed activity, to municipalities, private utilities, public bodies, and cooperatives within transmission distance authorized to engage in the distribution of electric energy and until it has published notice of such application once each week for four consecutive weeks in the Federal Register, and until four weeks after the last notice.

d. The Commission, in issuing any license for a utilization or production facility for the generation of commercial power under section 103, shall give preferred consideration to applications for such facilities which will be located in high cost power areas in the United States if there are conflicting applications for a limited opportunity for such license. Where such conflicting applications resulting from limited opportunity for such license include those submitted by public or cooperative bodies such applications shall be given preferred consideration.

* * * * *

[1] This subsection was added and original subsections "b" and "c" were relettered respectively "c" and "d" by P.L. 85-256, 71 Stat. 576 (1957).

SEC. 185. CONSTRUCTION PERMITS.—All applicants for licenses to construct or modify production or utilization facilities shall, if the application is otherwise acceptable to the Commission, be initially granted a construction permit. The construction permit shall state the earliest and latest dates for the completion of the construction or modification. Unless the construction or modification of the facility is completed by the completion date, the construction permit shall expire, and all rights there under be forfeited, unless upon good cause shown, the Commission extends the completion date. Upon the completion of the construction or modification of the facility, upon the filing of any additional information needed to bring the original application up to date, and upon finding that the facility authorized has been constructed and will operate in conformity with the application as amended and in conformity with the provisions of this Act and of the rules and regulations of the Commission, and in the absence of any good cause being shown to the Commission why the granting of a license would not be in accordance with the provisions of this Act, the Commission shall thereupon issue a license to the applicant. For all other purposes of this Act, a construction permit is deemed to be a "license."

* * * *

SEC. 189. HEARINGS AND JUDICIAL REVIEW.—

a. In any proceeding under this Act, for the granting, suspending, revoking, or amending of any license or construction permit, or application to transfer control, and in any proceeding for the issuance or modification of rules and regulations dealing with the activities of licensees, and in any proceeding for the payment of compensation, an award or royalties under sections 153, 157, 186 c., or 188, the Commission shall grant a hearing upon the request of any person whose interest may be affected by the proceeding, and shall admit any such person as a party to such proceeding. The Commission shall hold a hearing after thirty days' notice and publication once in the Federal Register on each application under section 103 or 104 b. for a license for a facility, and on any application under section 104 c. for a license for a testing facility.[1]

b. Any final order entered in any proceeding of the kind specified in subsection a. above shall be subject to judicial review in the manner prescribed in the Act of December

[1] The last sentence of Sec. 189 a was added by P.L. 85-256, 71 Stat. 576 (1957).

29, 1950, as amended (ch. 1189, 64 Stat. 1129), and to the provisions of section 10 of the Administrative Procedure Act, as amended.

* * * *

SEC. 202. AUTHORITY AND DUTY.—The Joint Committee shall make continuing studies of the activities of the Atomic Energy Commission and of problems relating to the development, use, and control of Atomic energy. During the first sixty days of each session of the Congress, the Joint Committee shall conduct hearings in either open or executive session for the purpose of receiving information concerning the development, growth, and state of the atomic energy industry. The Commission shall keep the Joint Committee fully and currently informed with respect to all of the Commission's activities. The Department of Defense shall keep the Joint Committee fully and currently informed with respect to all matters within the Department of Defense relating to the development, utilization, or application of atomic energy. Any Government agency shall furnish any information requested by the Joint Committee with respect to the activities or responsibilities of that agency in the field of atomic energy. All bills, resolutions, and other matters in the Senate or the House of Representatives relating primarily to the Commission or to the development, use, or control of atomic energy shall be referred to the Joint Committee. The members of the Joint Committee who are Members of the Senate shall from time to time report to the Senate, and the members of the Joint Committee who are Members of the House of Representatives shall from time to time report to the House, by bill or otherwise, their recommendations with respect to matters within the jurisdiction of their respective Houses which are referred to the Joint Committee or otherwise within the jurisdiction of the Joint Committee.

2. *JUDICIAL REVIEW ACT OF DECEMBER 29, 1950, AS AMENDED, SECTIONS 2, 4, 64 STAT. 1129, 1130, 68 STAT. 961, 5 U. S. C. §§ 1032, 1034.*

* * * *

SEC. 2. The court of appeals shall have exclusive jurisdiction to enjoin, set aside, suspend (in whole or in part), or to determine the validity of, all final orders (a) of the Federal Communications Commission made reviewable in accordance with the provisions of section 402 (a) of the Communications Act of 1934, as amended, and (b) of the

Secretary of Agriculture made under the Packers and Stockyards Act, 1921, as amended, and under the Perishable Agricultural Commodities Act, 1930, as amended, except orders issued under sections 309 (e) and 317 of the Packers and Stockyards Act and section 7 (a) of the Perishable Agricultural Commodities Act, and (c) such final orders of the United States Maritime Commission or the Federal Maritime Board or the Maritime Administration entered under authority of the Shipping Act, 1916, as amended, and the Intercoastal Shipping Act, 1933, as amended, as are now subject to judicial review pursuant to the provisions of section 31, Shipping Act, 1916, as amended, and (d) of the Atomic Energy Commission made reviewable by section 189 of the Atomic Energy Act of 1954, as amended.

Such jurisdiction shall be invoked by the filing of a petition as provided in section 4 hereof.

* * * * *

SEC. 4. Any party aggrieved by a final order reviewable under this Act may, within sixty days after entry of such order, file in the court of appeals, wherein the venue as prescribed by section 3 hereof lies, a petition to review such order. Upon the entry of such an order, notice thereof shall be given promptly by the agency by service or publication in accordance with the rules of such agency. The action in court shall be brought against the United States. The petition shall contain a concise statement of (a) the nature of the proceedings as to which review is sought, (b) the facts upon which venue is based, (c) the grounds on which relief is sought, and (d) the relief prayed. The petitioner shall attach to the petition, as exhibits, copies of the order, report, or decision of the agency. The clerk shall serve a true copy of the petition upon the agency and upon the Attorney General of the United States by mailing by registered mail, with request for return receipt, a true copy to the agency and a true copy to the Attorney General.

3. ADMINISTRATIVE PROCEDURE ACT, SECTION 10, 60 STAT. 243, 5 U.S.C. § 1009.

SEC. 10. Except so far as (1) statutes preclude judicial review or (2) agency action is by law committed to agency discretion—

(a) RIGHT OF REVIEW.—Any person suffering legal wrong because of any agency action, or adversely affected or

aggrieved by such action within the meaning of any relevant statute, shall be entitled to judicial review thereof.

(b) FORM AND VENUE OF ACTION.—The form of proceeding for judicial review shall be any special statutory review proceeding relevant to the subject matter in any court specified by statute or, in the absence or inadequacy thereof, any applicable form of legal action (including actions for declaratory judgments or writs of prohibitory or mandatory injunction or habeas corpus) in any court of competent jurisdiction. Agency action shall be subject to judicial review in civil or criminal proceedings for judicial enforcement except to the extent that prior, adequate, and exclusive opportunity for such review is provided by law.

(c) REVIEWABLE ACTS.—Every agency action made reviewable by statute and every final agency action for which there is no other adequate remedy in any court shall be subject to judicial review. Any preliminary, procedural, or intermediate agency action or ruling not directly reviewable shall be subject to review upon the review of the final agency action. Except as otherwise expressly required by statute, agency action otherwise final shall be final for the purposes of this subsection whether or not there has been presented or determined any application for a declaratory order, for any form of reconsideration, or (unless the agency otherwise requires by rule and provides that the action meanwhile shall be inoperative) for an appeal to superior agency authority.

(d) INTERIM RELIEF.—Pending judicial review any agency is authorized, where it finds that justice so requires, to postpone the effective date of any action taken by it. Upon such conditions as may be required and to the extent necessary to prevent irreparable injury, every reviewing court (including every court to which a case may be taken on appeal from or upon application for certiorari or other writ to a reviewing court) is authorized to issue all necessary and appropriate process to postpone the effective date of any agency action or to preserve status or rights pending conclusion of the review proceedings.

(e) SCOPE OF REVIEW.—So far as necessary to decision and where presented the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of any agency action. It shall (A) compel agency action unlawfully withheld or unreasonably de-

layed; and (B) hold unlawful and set aside agency action, findings, and conclusions found to be (1) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; (2) contrary to constitutional right, power, privilege, or immunity; (3) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; (4) without observance of procedure required by law; (5) unsupported by substantial evidence in any case subject to the requirements of sections 7 and 8 or otherwise reviewed on the record of an agency hearing provided by statute; or (6) unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court. In making the foregoing determinations the court shall review the whole record or such portions thereof as may be cited by any party, and due account shall be taken of the rule of prejudicial error.

II. Pertinent Provisions of Regulations

Section 50.34. *Contents of applications; technical information hazards summary report.* Each application shall state the following technical information:

(a) A description of the chemical, physical, metallurgical, or nuclear process to be performed, and a statement of the kind and quantity of any radioactive effluent expected to result from the process. The description of the process should be sufficiently detailed to permit evaluation of the radioactive hazards involved. The magnitude of the proposed operation should be indicated in terms of the amount and radioactivity of source, special nuclear, or by-product material to be handled per unit of time, and thermal power to be generated if any.

(b) A description of the facility. The description should be based on the design criteria for the facility as a whole and for those major component parts which are essential to the safe operation of the facility, and should be presented in sufficient detail to allow an evaluation of the adequacy of the various means proposed to minimize the probability of danger from radioactivity to persons both on and off-site. The description should also cover any activities, other than those subject to license, proposed to be carried on in the building which will house the facility and on the balance of the site.

(c) A description of the site on which the facility is to be located. This should include a map of the area show-

ing the location of the site and indicating the use to which the surrounding land is put, i.e., industrial, commercial, agricultural, residential; location of sources of potable or industrial water supply, watershed areas and public utilities; and a scale plot plan of the site showing the proposed location of the facility.

(d) A description of proposed procedures for: routine and non-routine operations, start-up and shut-down, maintenance, storage, training of employees, minimizing operational mishaps (such as locked controls, checklists, and close supervision), investigating unusual or unexpected incidents; and a description of such other details as may be useful in evaluating the existence and effectiveness of safeguards against the radioactive hazards in the operation of the facility.

(e) A description of plans or proposals in the event that acts or accidents occur which would create radioactive hazards. The description should relate the various operational procedures, the protective devices, and the pertinent features of the site, to such happenings as operational mistakes, equipment or instrument failure or malfunction, fire, electric power failure, flood, earthquake, storm, strike, and riot.

(f) Meteorological, hydrological, geological, and seismological data necessary for evaluating the measures proposed for protecting the public against possible radioactive hazards.

(g) An evaluation of the proposed measures and devices to prevent acts or accidents which would create radioactive hazards or to protect against the consequences should such acts or accidents occur.

(h) A description of procedures for disposal of radioactive solid waste and the final disposal of liquid waste effluent.

(i) A description of means provided to sample atmosphere discharges through stacks where such stacks may emit by-product material or special nuclear material.

SECTION 50.35. *Extended time for providing technical information.* Where, because of the nature of a proposed project, an applicant is not in a position to supply initially all of the technical information otherwise required to complete the application, he shall indicate the reason, the items or kinds of information omitted, and the approximate times when such data will be produced. If the Commission is satisfied that it has information suffi-

cient to provide reasonable assurance that a facility of the general type proposed can be constructed and operated at the proposed location without undue risk to the health and safety of the public and that the omitted information will be supplied, it may process the application and issue a construction permit on a provisional basis without the omitted information subject to its later production and an evaluation by the Commission that the final design provides reasonable assurance that the health and safety of the public will not be endangered.

(1458-9)